Q. Taking the D&C first, what do you mean by "D&C"?

A. The letters D&C, the acronym stand for dilation and curettage, which is the french word "to scrape." And so that means dilating or opening the cervix of a woman and then going ahead and removing the contents of the uterus by sharp or suction curettage.

Q. And what is your experience with D&C—with D&C's going back to medical school?

A. In medical school I observed several D&C's on live babies for termination of pregnancy that were elective. However, I [1196] didn't directly participate by holding instruments. Instead, I took my training in that on babies that had already died.

Q. And approximately D&C's have you done in your career?

A. I'm sure it is in the hundreds range.

Q. And do you continue to perform D&C's in your current practice?

A. Yes, I do.

Q. Now, next, turning to the D&E, what do you mean by "D&E" or dilation and evacuation?

A. The way I use that term is generally when they are in the second-trimester of pregnancy where usually laminaria or osmotic dilators are used the day before the procedure to open the cervix of the women, and generally that is placed as gently as possible with the laminaria placed being inside the cervix, sometimes with traction on the cervix and sometimes without.

And then, the next day in the operating room a woman is taken to the operating rōom, a speculum is

placed in the vagina. The laminaria are removed, and then a device is decided upon which to put traction on the cervix to straighten the cervix angle with the rest of the uterus out, and then with a series of instruments the baby is disarticulated or removed in pieces with certain kinds of forceps. And then, the fluid in the membranes and the placenta is also removed. And sometimes we use ultrasound guidance for this procedure, as well.

[1197]

Q. Could you please explain to the court your experience in performing D&E's?

A. Yes. First as a student I watched quite a few D&E's because I was interested in finding out how they were performed and why they are performed on different kinds of women in different situations.

And then, as a medical student, especially as a resident, I actually made it a point to learn how to do this procedure properly. And I tried to participate in as many as I possibly could as a resident because I knew this was my window of opportunity to learn.

So I probably participated in 30 to 50 as a resident over four years.

Q. And approximately how many times in your career have you performed a D&E procedure?

A. Total number of times probably 60 to 70.

Q. And has this always involved dismemberment of the fetus?

A. Yes.

Q. In the D&E procedures that you have performed or participated in, have those fetuses been alive or dead?

A. The ones I actually held the instruments and actually did the actual procedure the baby had been dead.

Q. And when you observed at one of those observations, observations of D&E's performed on live fetuses?

A. Yes, many were.

[1198]

Q. Is the extraction part of the D&E procedure that you perform when the fetus has died different from the D&E procedure performed on a live fetus?

A. The actual technique is the same, but the way the baby's disarticulated, pulled apart, would probably be somewhat easier with a dead baby than it would be on a live baby.

Q. And would that depend on how long the baby has been dead for?

A. Yes, it would.

Q. Up to what gestational age have you observed a D&E on a living fetus?

A. Between 20 and 22 weeks.

Q. Next, turning to the induction procedure. In general terms, what do you mean by "medical induction"?

A. Medical induction of labor is when certain medicines are given either orally, through the mouth, vaginally, or even instilled into the amniotic fluid

around the baby that will make the body have contractions and expel the baby physiologically.

Q. What is your experience with the induction method of termination?

A. Well, as a student I actually rotated at something called the Francis Scott Key Medical Center or the County Medical Center, and they did quite a few instillation medical induction procedures because they actually did the most number in [1199] Baltimore, so I got direct opportunity to see what their protocols were, to actually talk to women undergoing the procedures. So I observed several during that time. Probably ten to twenty of those at the Francis Scott Key. And then, during residency is when things shifted somewhat. And instead of just instillation, we also shifted over to more prostaglandins. So, of course, we have used oxytocin or pitocin for many years for inductions of labor.

Q. Do you currently use the medical induction for termination of pregnancies?

A. Yes, I do.

Q. And how frequently do you use that method?

A. Depends on the clinical situation, but as the need arises sometimes on a weekly basis we need to induce women's labors because of medical problems or problems with the baby.

Q. Currently, what agent or agents do you use when performing an induction for termination of pregnancy?

A. The most common two medications we use are the misoprostol, which is one of the prostaglandins that

we have been talking about, and the other one is oxytocin.

Q. Is oxytocin is a prostaglandin?

A. No, it is not. It is a separate category of medication.

Q. And just to be clear—you touched on this—how are those agents, the misoprostol and oxytocin, administered to the women?

[1200]

A. The misoprostol is given either orally to a woman or intravaginally, the way we use it. And then, the oxytocin is an IV drip.

Q. When you say an "IV drip," is this different than instillation?

A. Yes. It means an intravenous going to a women's vein with a mixture of some kind of saline solution plus the medication itself: oxytocin.

Q. And for approximately how long have you been performing inductions with prostaglandins and oxytocin?

A. For my entire career of practice, with one or both. Fourteen years, approximately.

Q. When was the last time you performed an induction using an instillation method?

A. Probably the last time I saw instillation methods were when I was a resident.

Q. So, approximately what year?

A. In the early '90's. And in medical school in the late '80's.

Q. And when there is an instillation, can you explain where the instillation—where the injection is installed into the woman?

A. So generally, it is very similar to an amniocentesis. Instead of fluid being drawn off from around the baby, instead medications would be injected around the baby into the amniotic [1201] fluid.

Q. Do you consider inductions with the use of prostaglandins and oxytocin different in any material way from the instillation methods?

A. Well, because the women's uterus is not punctured with a needle, it is a different process. And so one might assume that there might be different complications and different amounts of medications used, for example.

Q. Have you used the medical induction procedure when the fetus is previability?

A. Yes, I have.

Q. And have you used the medical induction procedure when the fetus is postviable?

A. Yes.

Q. What do you understand "previable" to mean?

A. Generally, you say "previable" is any time before a baby can survive outside the mother's uterus. So in current, general practice for neonatal practice we usually say viability is at approximately 23 weeks gestation.

Q. Do you currently perform more inductions than D&E's?

A. Yes, I do.

Q. Why is it that you've had the occasion to perform more inductions than D&E's in your practice?

A. In general, the way it's set up at University of Michigan, we get transfers of very sick women. And I take call with the [1202] residents. We call it "supervisory call" at nighttimes. So whenever there is transfers of sick women, many of them—I would say in a year we have a few in the late second-trimester who are quite sick. Many more in the third-trimester who are sick and, in fact, need to be delivered.

And because we have a very high level neonatal unit we get transfers all southern Michigan and northern Ohio to our institution.

Q. And what does that have to do with whether or not you perform induction more than D&E?

A. The data has shown that in the late second-trimester of 20 weeks and above that actual medical induction's a safer procedure for women rather than the dilatation and evacuation.

So when we are presented with patients who have medical problems in the late second-trimester, it has been our habit because of the safety data to use medical induction of labor rather than D&E to end a pregnancy.

Q. Dr. Shadigian, focusing on your experience with pregnancy terminations while in medical school, and in your residence, did you make a special effort—you have already touched on this, but did you make a special effort to learn about pregnancy termination?

A. Yes, I did.

Q. Why did you make that special effort?

A. I knew it was something that was really common for women to [1203] choose to have an abortion, that in the first or second-trimester women electively decide to have an abortion. And they also decide because of problems with the baby and problems with their own health. So I wanted to make sure I understood all of the ramifications that making those decisions would have on a woman.

And because about 43 percent of women have an abortion by the time they are age 45, I knew I would have a lot of women in my practice who had had abortions. And so I needed to know how to take best care of them, both during the time they are making important decisions and afterwards, and then in the long run.

Q. While you were in Baltimore training, at what institutions did you work where abortion services were provided?

A. At the Johns Hopkins Hospital I was a medical student and Francis Scott Key Medical Center, the county hospital, as well.

Q. And—

A. And one more thing. Did you ask me just for medical school or medical school and residency?

Q. Well, I was wondering during your training just at what institutions did you work where abortion services were provided?

A. And also Franklin Square Hospital, as well.

Q. What kinds of patients did you see and treat?

A. Basically, the full range of patients that they would have [1204] at that institution, so both elective

terminations, as well as women who were sick and women who had babies with anomalies.

Q. Did you see women with teen pregnancies, in particular?

A. Yes. In fact in my residency we had the unfortunate but needed service of providing pregnancy care and labor and delivery care to a high percentage of teen women. In fact, Baltimore had and still has one of the highest teen pregnancy rates in the country.

And so that was one of the things that we especially took care of were teens.

Q. Was the induction method of termination of pregnancy, was that frequently used at the Johns Hopkins Medical Center?

A. Yes, it was.

Q. Now, I would like to ask you some questions about your teaching responsibilities. Could you please generally describe your teaching responsibilities at the University of Michigan?

A. There are basically four sets of students and/or residents that I teach. One are undergraduate students where I guest lecture in women's studies courses, psychology courses, sociology courses and graduate-level teaching in the nurse midwifery program as well as in certain psychology Ph.D. thesis I have been on.

And then, in the medical students I lecture on interpersonal violence issues, including domestic violence, sexual assault, child abuse and elder abuse. I run a [1205] second-year course in this.

The third year I teach the students rotating through our department in OB/GYN by both hands-on

learning and teaching, as well as giving lectures every six weeks in both breast-feeding and more complicated domestic violence issues.

And, then, finally I run a fourth-year medical student elective called "primary care OB/GYN" where senior students get to pick different topics they are interested in and understand them from both clinical and didactic angles, basically.

And those are the student areas. And then, the residents I teach—the most time I teach are actually OB/GYN residents that we have in our program.

And then, I have had the occasion on an ongoing basis to teach family practice residents and internal medicine and pediatric residents, as well.

Q. And with the residents, what kinds of things do you teach to the residents?

A. Just the full range of what I do in the office setting and in the inpatient setting, I will discuss with the residents. But how it sort of works where I am set up is that it feels that if you are a woman coming to my office it feels like a private office. That you just see me most of the time in the office.

Sometimes I will have a student with me, sometimes I [1206] won't. But then with the residents I am doing more inpatient work, meaning supervising GYN procedures, labor and delivery procedures. And then, sometimes people consult me, especially women who have been abused, because that is my other area of interest.

Q. And do you supervise residents in performing pregnancy terminations?

A. If the baby has already died and it's my own patient I would have her come to the operating room after I've consented her, and one of the residents would scrub in and assist me in most procedures.

And, in addition, if I am on call, supervisory call, and someone is transferred in and they need to have a medical induction of labor, then I would supervise the residents in that case, as well.

Q. Doctor, do you also teach about abortion complications?

A. Yes, I do.

Q. And who do you teach?

A. Well, it would depend at the time, but many times women are readmitted after having a termination of pregnancy, for whatever reason, with a fever, with hemorrhaging, with other complications that are common, and we need to go back and do another procedure, so a curettage or scraping to get the rest of the placenta out.

So there is the hands-on kind of teaching when the [1207] women is readmitted. And then, there has been other occasions when I have been asked to speak in front of different groups to talk about abortion complications because of the paper I have written.

Q. What kinds of groups are those that you've lectured to about abortion complications?

A. I have lectured to different groups of ACOG, the American College of Obstetricians and Gynecologists. I have given grand rounds in medical institutions. And then, any groups that have asked me to come, and if I can put them on my schedule I have gone ahead and lectured to different groups.

Q. What kinds of abortion complications have you treated in your practice?

A. The most common ones are infections after an abortion procedure, retained placenta, meaning that there is still some kind of placenta or different parts of the baby that can be left inside. And then, there are other things that I do attribute to abortion, such as women who have had early births in another pregnancy and women who have placenta previa, for example.

Q. I would now like to touch on your research responsibilities. In what areas have you performed research and writing?

A. My two biggest areas of research are on violence against women, so I have done different studies and then published them [1208] on issues around violence against women. And also on abortion complications. One thing that I am sort of subspecialized in is something called "systematic review," so that when we look at publications previously published in peer reviewed journals I try to take not just one or two articles and synthesize them, but do a whole literature search and gather all the articles on a certain topic and then try to make sense of what they show in aggregate.

So I have done that on both issues around violence against women and issues around abortion complications.

Q. How does your research in the areas of domestic violence relate to your OB/GYN practice?

A. Again, violence against women is a very common problem, both in the United States and worldwide. So I knew when I was a resident, a medical student that I would see a lot of women who have been abused.

And so, again, to take the best care of women I can, I need to be able to understand their personal situation in terms of: Is it safe at home? Have they possibly been assaulted as a girl or as a young woman, because I am going to be operating on them and I am going to be someone that they really need to trust.

And if they can't trust that I care about those very intimate and scary areas of their lives, then it is going to be hard for them to trust me about the medical things. [1209]

So I think they go together. And that is part of why I wanted to know about abortion, because, again, it is one of these very intimate and personal areas where, you know, women need to have a lot of support in their physician.

Q. Have you written any articles about the long-term complications of abortion?

A. Yes, I have.

Q. What is that article?

A. In January of 2003, myself and two other co-authors from University of North Carolina got published an article looking at the long-term, both physical and psychological, complications of abortion, called "A Review of the Evidence," which is, again, one of the systematic reviews.

Q. Was that peer reviewed?

A. Yes, it was.

Q. Are you a journal reviewer for any publications?

A. Yes.

Q. Which journals?

A. I have been asked to be journal reviewer for many. Some examples are the Green Journal, which is one of the major OB/GYN journals called Obstetrics and Gynecology. And then, the American Journal of Obstetrics and Gynecology, The Mayo Clinic Proceedings, The Female Patient and several others.

Q. Do you belong to any professional organizations?

[1210]

A. Yes, I do. Probably the one that is most important to me and the one I am most intimately involved in is the American College of Obstetricians and Gynecologists. In addition, I'm part of many other organizations, as well.

Q. Are you also a member of AAPLOG?

A. Yes. AAPLOG is the American Association of Pro-Life Obstetricians and Gynecologists. And, in fact, is a part of ACOG, the main group. It's a special interest group of ACOG.

Q. Are you a fellow of ACOG?

A. Yes, I am.

Q. Briefly, why did you decide to specialize in obstetrics and gynecology?

A. Well, women are near and dear to my heart, I guess possibly because I am one, too. But just I was fascinated by the breadth of what we do to take care of women, both on the obstetrical end and the gynecological end.

And that I liked being able to follow women over time and give them time to get to know me personally and so I could help them with major life decisions and be a sounding board for medical information, too.

Q. Turning to the partial-birth abortion procedure, what do you understand the partial-birth abortion procedure to be?

MS. KRASNOFF: Objection, foundation.

THE COURT: Sustained.

[1211]

THE WITNESS: In short—

THE COURT: Just a moment.

THE WITNESS: Oh, I'm sorry.

THE COURT: She'll ask you a different question.

BY MS. CLARK:

Q. Dr. Shadigian, have you heard the term "partial-birth abortion"?

A. Yes, I have.

Q. And what do you understand "partial-birth abortion" to mean?

MS. KRASNOFF: Objection, foundation. She's not been qualified to testify about that area.

THE COURT: You haven't even told us yet what you are offering her to testify about.

MS. CLARK: I can jump to that. Your honor, defendant offers Dr. Shadigian as an expert in obstetrics and gynecology, pregnancy termination and abortion complications.

THE COURT: All right. And do you have an objection?

MS. KRASNOFF: We would like to voir dire on pregnancy termination.

THE COURT: And not abortion complications?

MS. KRASNOFF: No, your honor.

THE COURT: All right. You may do so.

MS. KRASNOFF: As they relate to specific methods, [1212] perhaps. But not—

THE COURT: Opposing counsel is going to ask a few questions before I determine what areas you are competent to testify as an expert in.

[VOIR DIRE EXAMINATION]

BY MS. KRASNOFF:

Q. Good morning, Dr. Shadigian. I am Helene Krasnoff. We met at your deposition.

In your career, you have performed between 20 and 40 previability abortions where the fetus was alive at the beginning of the procedure; is that correct?

A. That's approximately correct, yes.

Q. And you testified on direct that you performed terminations of pregnancy weekly, but those are not previable; is that correct?

A. Correct.

Q. Actually, on previable fetuses you perform about two or three per year; is that correct?

A. That's correct.

Q. And each and every one of those is by the induction method; is that correct, where the fetus is alive?

A. Where the fetus is alive, that's correct.

Q. In fact, you have never performed a D&E procedure on a live fetus; is that correct?

A. That is correct.

[1213]

Q. And you have never performed a hysterotomy on a live fetus; is that correct?

A. Not that I can recall.

Q. So your only experience performing D&E's are on fetuses that have already demised; is that correct?

A. Yes, except for when I was observing others doing D&E's on live babies.

Q. So your only experience actually performing them yourself; is that correct?

A. That is correct.

Q. As a faculty member at the University of Michigan over the past 10 years, you have only supervised or participated in between 10 and 20 D&E's where the fetus had demised; is that correct?

A. That is correct.

Q. So, if you average that out that supervision with a demised fetus happens between zero and two times each year; is that correct?

A. That is correct.

Q. And the latest gestational age at which you have actually performed a D&E on a dead fetus at the University of Michigan in the past 10 years is at 17 or 18 weeks; is that correct?

A. That is correct.

Q. And isn't it true that some D&E's may require surgical skills beyond your practice such that you would refer those to [1214] the maternal fetal medicine specialists?

A. That is correct.

Q. Turning to intact D&E, you yourself have never performed an intact D&E; is that correct?

A. That is correct.

Q. And you haven't supervised anyone else performing an intact D&E, have you?

A. That is correct.

Q. You haven't observed an intact D&E abortion being performed; is that correct?

A. Not live, that's correct. I have not seen one live; that is correct.

Q. And you haven't been taught the intact D&E procedure, have you?

A. That is correct.

Q. And you haven't taught it to any medical students or residents, either, have you?

A. That is correct.

Q. And you have never discussed intact D&E with any physician who performs intact D&E, have you?

A. That is correct.

Q. And you don't actually personally know any physician who performs intact D&E, do you?

A. Probably not.

Q. And you haven't discussed the intact D&E procedure with any [1215] other physician at the University of Michigan, whether he or she performs intact D&E or not?

A. That is correct.

Q. And prior to December 22, 2003, you never done a literature search about intact D&E abortions, had you?

A. That is correct.

MS. CLARK: Your honor I am just going to object. We haven't sought to qualify her as an expert on the technique of the D&X procedure, so I think it is outside the scope and not particularly relevant.

THE COURT: Counsel, this is voir dire. This is voir dire. She can ask those kinds of questions.

BY MS. KRASNOFF:

Q. And at that time back in December, you also hadn't done a literature search for the purpose of comparing the safety of second-trimester abortion procedures; is that correct?

A. That is correct.

Q. So it wasn't until after you were contacted to testify in this case that you performed the literature reviews which form the basis of the opinions you are going to offer today; is that correct?

A. That is correct.

Q. And, in fact, it was because of that unfamiliarity that it took you more than 35 hours from the time you were contacted until your expert report was prepared to prepare it; is that [1216] right?

A. I don't know what you mean.

Q. I could show you something that might refresh your recollection.

Dr. Shadigian, I have shown you an invoice for the time spent on this case. Does that refresh your

recollection about the time you spent preparing your expert report?

A. I believe you asked the question—yes. But you asked a question about if it was just all spent on literature search, I thought.

Q. Oh, I'm sorry. Did you not spend 35 hours of work from when you were first contacted until you signed your expert report on January 16th?

A. That is correct.

Q. And you hadn't previously, prior to December, done any research related to these methods of abortion in the second-trimester; is that right?

A. Not formal, yes.

MS. KRASNOFF: Your honor, plaintiffs believe that Dr. Shadigian does not meet the standard laid out by the court last week on being able to testify about how intact D&E abortions are performed. She has never performed, supervised, observed, taught, been taught or even spoken to any physician who performs that procedure.

We do not object to Dr. Shadigian being qualified as [1217] an expert in obstetrics and gynecology, generally. And we do not object to her speaking generally about her research in the complications related to abortion. As they relate to specific procedures, such as intact D&E, we believe there is no basis for that.

However, as the court permitted last week with Dr. Sprang, we don't object to her providing expert opinion on the safety of intact D&E based on her general expertise in OB/GYN, nor her briefly setting forth her understanding of the procedure in order to

offer those opinions that are based on external sources only.

But her testimony regarding how intact D&E abortions are performed, we submit, would thus not be for the truth of how that procedure is, but rather that those are the bases of how she understands it for her opinions.

THE COURT: All right. Any response, Ms. Clark?

MS. CLARK: I might have missed something. I am not sure if they are objecting to the abortion complications and her views on abortion complications. But I think her research—she wrote an article about—specifically about abortion complications. Whether an expert is qualified is based on knowledge, skill, experience and training. And she has had sufficient training in abortion complications. She has treated patients with abortion complications.

With respect to pregnancy termination, as she [1218] testified she has performed medical induction when it was been necessary for medical health conditions for the woman. She's observed D&E's on live fetuses. She's performed D&E's—

THE COURT: I think you weren't paying attention to her objection.

First of all, did you object to the witness being qualified on the question of abortion complications?

MS. KRASNOFF: Not as they relate to all methods of abortions. In fact, I would happy to voir dire on her research particularly related—

THE COURT: No. I think that is actually satisfactory.

Her objection was the same as with regard to Dr. Sprang, with regard to her testifying as an expert on intact D&E. My ruling would be the same, unless you have some compelling reason why I should change my ruling with respect to this doctor.

MS. CLARK: I think the ruling is consistent with Dr. Sprang's ruling.

THE COURT: All right. Then, the doctor will be—Dr. Shadigian?

THE WITNESS: Shadigian, that's right.

THE COURT: —shall be qualified to testify as an expert in obstetrics and gynecology and on pregnancy termination with the exception of intact D&E and abortion [1219] complications.

She may, however, opine, obviously, as to the safety of the intact method and may testify as to what her understanding is. That testimony obviously will not be considered for the truth of the matter given that she has not observed, taught, or performed such procedure herself.

All right. You may continue.

[ELIZABETH SHADIGIAN, M.D.—DIRECT EXAMINATION RESUMED]

BY MS. CLARK:

Q. Dr. Shadigian, what do you understand the partial-birth abortion procedure to be?

A. In short, the partial-birth abortion procedure can be broken down into four separate parts. One is serial dilation of the cervix over two days to open the cervix or dilate it.

The second is the instrumental conversion of fetus or baby in a nonbreech presentation to a breech presentation.

And then, delivery of the baby up to the base of the skull.

And then, finally, placing, for example, scissors or other such instruments in the base of the skull and extracting the contents of the skull, and then delivering the rest of the baby.

Q. What materials have you reviewed that form the basis of your opinion that what you just described is a partial-birth abortion procedure?

[1220]

A. I've reviewed Dr. Haskell's initial report in 1992. I reviewed Dr. Paul's book, which describes both the Haskell cases as well as McMahon's cases. And then, I've also looked carefully at the ACOG document about D&X procedure.

Q. Do you understand the terms "D&X" and partial-birth abortion? Do you use those terms interchangeably?

A. I do, and I also include intact D&E with all the other definitions.

Q. Dr. Shadigian, is it your understanding that a D&X procedure would also be a surgical abortion in which the physician intentionally extracts a live fetus intact in a breech presentation until the head gets lodged at the women's internal cervical os, and then decompresses the head in order to vaginally deliver a dead fetus?

A. Yes.

Q. Doctor, can you briefly—what is your opinion as an expert in the field of obstetrics and gynecology about the medical necessity of a partial-birth abortion procedure?

A. I have never personally had to use a partial-birth abortion procedure to take care of women, even sick women with medical conditions.

I never seen any of my colleagues at the University of Michigan use it, nor have–I in medical school or residency ever seen this used to take care of even the sickest women.

Q. Dr. Shadigian, what is your opinion as an expert in the [1221] field of obstetrics and gynecology about whether the partial-birth abortion procedure offers safety advantages over other methods of abortion during the second-trimester of pregnancy?

A. The partial-birth abortion procedure has never been studied in a systematic way and reported in the literature in a peer-reviewed presentation nor in a peer-reviewed journal article. So, there is no sound basis to say there is anything safe about the D&X procedure, especially when there are other procedures, like the D&E procedure and the medical induction procedure that are safe and well-studied in the medical literature.

Q. Is there anything in your training and experience that you found particularly useful in evaluating the medical necessity of the partial-birth abortion procedure?

A. Well, I did perform both a domestic and international literature search just because I wasn't sure if there were articles that had been published or not. And so up through the beginning of January 2004, I

performed a full literature search, and I had specialized librarians help me to make sure I didn't miss any keywords. So because I actually have done that myself I feel confident saying there hadn't been any published data on the D&X procedure.

Q. And is there anything with respect to your training or clinical experience that helps you form your opinion?

* * * * *

[1229] our first choice.

Q. And why do you offer medical induction as the first choice at 20 weeks or later?

A. Just because the safety data is so much better at 20 weeks and greater, especially now that we use almost exclusively misoprostol for inductions, although not exclusively.

Q. Do you continue to treat your patients after they have had a termination for a fetal anomaly?

A. I make it really clear to women that I am their doctor, whether they choose to have an abortion for either fetal anomalies or electively or for whatever reason; that I want to continue to be their doctor afterwards. And I have done that on many occasions.

Q. Have you delivered babies for some of your patients after they have had a termination for maternal complication or because of a fetal anomaly?

A. Yes, I have.

Q. Doctor, in your opinion, is the D&X procedure ever necessary to terminate a pregnancy in which there is a fetal anomaly?

A. No.

Q. Why not?

A. There are just other better methods, both the D&E disarticulation method as well as medical induction have safety data that we know about from many different sources, from many [1230] different institutions, both nationally, internationally, so that we have some basis to talk about safety when we talk about those two procedures.

Q. In your experience in treating patients with fetal anomalies, is there anything unique about the fetal anomalies that you have seen that would require an intact extraction as performed in the D&X procedure as you understand that procedure?

A. No, I have not.

Q. Have you ever had a patient with the fetal anomaly of conjoined twins?

A. Yes, I have.

Q. What happened with that patient?

A. This was a patient of mine who I had helped with her first pregnancy, and this was a second pregnancy. And she was diagnosed on her routine ultrasound of having two babies, and two babies connected at both the thorax or upper chest and lower abdomen. So there were two babies, two heads, two sets of shoulders, et cetera.

And so, we talked in the office right afterwards, that this, because of the kind of anomaly it was, wasn't something that could be fixed because of how complicated the heart defect was. And it wasn't something that you could just separate the babies and they would be fine later; you know, that it probably was a lethal anomaly for the babies.

* * * * *

[1233] D&X procedure is a different procedure than the D&E procedure, and that it dilates the cervix more. That it is usually performed later in a pregnancy, and that it involves a nonphysiologic pulling the baby through the cervical os and then explaining the whole procedure in terms of what happens with the baby's head, et cetera, so that they could be truly informed of what it is.

Q. In your medical opinion, is it sound for physicians to rely on their own experience in performing the D&X in deciding to perform a D&X on a patient?

A. No.

Q. Doctor, the court has heard physicians testify who have performed D&X procedures and who performed some variation of the D&X procedure. They have testified that the procedure is safe, based on experience.

What is your opinion with respect to the assertions that the D&X procedure is intuitively safe based on clinical experiences with that procedure?

A. Well, I believe that those abortion providers are telling the truth; that they believe that the D&X is just as safe as a D&E disarticulation procedure. But it is really based on anecdote. It's just based on doing this procedure at the same time on different patients. So that it can be considered sort of like a case, but it can't be considered long-term safety data. It can't be [1234] considered short-term safety data, especially because most abortion providers never see their patients back after the abortion procedure.

MS. KRASNOFF: Objection, Your Honor, foundation.

THE COURT: Sustained.

MS. CLARK: Is it sustained on a patient—I mean, they never see them back, though, that part of the foundation?

THE COURT: The first part of the question.

BY MS. CLARK:

Q. Doctor, you testified that many patients don't go back to the doctor for whom they receive abortion follow-up care; is that correct? Or something to that—

MS. KRASNOFF: I believe that was stricken based on the objection.

THE COURT: The objection was sustained. You need to establish a foundation that she has that knowledge.

BY MS. CLARK:

Q. Doctor, do you have an opinion as to whether or not patients frequently return to their physician who performed the abortion for follow-up care? Just do you have an opinion?

A. Yes, I do have an opinion.

Q. What is that opinion based on?

A. The opinion is based on two things: one, my own patients who have received abortions from different providers, and second from medical research.

* * * * *

[1269] fact, terminate the pregnancy?

A. Well, what we try to do is look at the evidence and studies. So what we try to do is look at, you know, D&E procedure at different gestational ages and medical induction procedure at different gestational ages, and see if we can draw some kind of conclusions from actual studies. Not just at U of M, but people's studies across the country and across the world, so that we can look at data and know that we are offering our patients the best medical care possible and try to reduce the amount of morbidity and mortality that a woman makes during this from the choices around induction or D&E procedure.

MS. CLARK: Your honor, may I approach?

THE COURT: Yes.

BY MS. CLARK:

Q. Doctor, I have just shown you what has been identified as Defendant's Exhibit LT A-15. Have you seen this article before?

A. Yes, I have.

Q. And does this article support your opinion in any way about the safety of induction at the later stages in the—of the second-trimester of pregnancy?

A. Yes, it does.

Q. I direct you to table number 4, which is on page 727.

Does this table support your opinions in any way?

A. Yes. This table looks at D&E, or dilation and evacuation, [1270] procedure versus labor induction. And it shows that labor induction is safer at 21 weeks

and greater. And this is using even the old instillation methods, not the more modern misoprostol.

Q. What is the significance of using the early methods as opposed to the misoprostol drug used with labor induction?

A. Well, the newer studies have shown misoprostol is, in fact, even safer than old instillation methods. So that we can safely assume that if this is done with misoprostol modernly, we would have even lower rates of mortality for women at 21 weeks and greater.

Q. And this data, what year was this data based upon?

A. This was based on early data from 1972 to 1987.

Q. If you look at table 4, I think it—I will just leave that.

Now, doctor, are there other studies or articles that you have relied upon in forming your opinion that induction is as safe or safer than the D&E procedure at certain stages in the second-trimester of pregnancy?

A. Yes.

Q. And are those the Grimes studies?

A. Yes.

MS. CLARK: Your Honor, may I approach?

THE COURT: Yes.

BY MS. CLARK:

[1271]

Q. Dr. Shadigian, I have handed you what has been marked as Defendants Exhibit LT A-25. Is this one of the Grimes studies you were referring to?

A. Yes, it is.

Q. What year was this study published?

A. This study was published in 1985.

Q. If I could have you return to page 93. And in the second full paragraph, the paragraph begins:

"The greater comparatives."

A. Yes.

Q. If you read that second sentence in that paragraph, would you read that second sentence out loud?

A. Certainly. "At greater than or equal to 16 weeks gestation the risks of death from D&E and from instillation abortion are—similar and statistically indistinguishable."

Q. And does this sentence support your opinion about the relative safety of D&E and induction?

A. Yes, it does.

Q. And does the change in the use of misoprostol affect the study in any way, do you think, with respect to induction procedure?

A. Well, just with the newer misoprostol, in fact, it has been shown it is even safer than instillation methods, so we should [1272] find that mortality is lower with modern use of prostaglandins, as compared to D&E.

Q. Now, what is your basis for your opinion that misoprostol has improved the method of induction?

A. There are several articles and several studies that have been performed around the world that are how I base my opinion about misoprostol.

MS. CLARK: May I approach the witness?

THE COURT: Yes.

BY MS. CLARK:

Q. This is Defendant's LT A-27.

Dr. Shadigian, I have handed you what has been identified as Defendant's Exhibit LT A-27.

A. Yes, I have it.

Q. If you would look at the first column, turning to the second paragraph where it begins:

"The details of the beneficial effects."

Do you see that?

A. Yes.

Q. Would you read out loud the second sentence in that paragraph, beginning with "however"?

A. "However, for one specification indication, cervical ripening as a prelude to induction of labor, misoprostol has been used so frequently and effectively that it has become the treatment of [1273] choice."

Q. Would you agree with that statement?

A. Yes, I do.

Q. If you turn to the next page, the left-hand column, at the very bottom the sentence beginning:

"Yet we reaffirm." Would you begin with "we reaffirm," and read that sentence?

A. "We reaffirm that misoprostol is a safe and effective drug for cervical ripening and induction of labor when used appropriately."

Q. And do you agree with that statement?

A. Yes, I do.

MS. CLARK: May I approach?

THE COURT: Yes.

BY MS. CLARK:

Q. I am handing you what has been identified as Plaintiffs' 31. I would like you to turn to page 142, please. And the "Abortion by Labor Induction" chapter.

If you look under the section "Morbidity and Mortality," in that first paragraph, would you read out loud the very last sentence?

A. Starting with "although"?

Q. Oh, I am sorry. No. Starting with—we're on page 142, under "Morbidity and Mortality," the first full paragraph. The sentence that begins: [1274]

"An increase use, increased use of vaginal prostaglandins."

A. Okay. "Increased use of vaginal prostaglandins. Improvements in technique and better cervical preparation have probably reduced mortality from induction abortions."

Q. And do you agree with that sentence?

A. Yes, I do.

Q. Do you understand that sentence to refer to improving it from the instillation method of induction?

A. Yes. They have tables about instillation methods on the same page, even.

Q. And is misoprostol a prostaglandin?

A. Yes, it is.

Q. Do you know if other physicians besides yourself are using misoprostol in connection with the induction method of pregnancy termination?

A. Yes, I do.

Q. How do you know that?

A. Because I practice at U of M, and I have to take over after they have started an induction, and I know what techniques they are using.

In addition, we have a web site where we have different protocols. And one of the protocols is about misoprostol.

* * * * *

[CROSS-EXAMINATION BY MS. KRASNOFF]

[1283]

* * * * *

Q. And you would agree, would you not, if there were two women at 20 weeks gestational age, both are going to have D&E abortions, and both get the same doses of misoprostol and the same number of laminaria, you will not necessarily get the same amount of dilation in each of those two women; is that correct?

A. Yes.

Q. Now, you agree, would you not, that in performing a D&E the physician may apply traction to the fetal part that he or she is grasping and be able to pull it through the cervical os?

A. Yes, that can be done.

Q. And if that happens, the part that has been brought through the cervix may disarticulate at the internal cervical os due to the traction; is that correct?

A. Yes, it may.

Q. But you agree it is possible in that situation if there is adequate dilation that the physician would be able to extract the fetus up to the torso; is that correct?

A. Possibly.

Q. And if that happened and you were supervising a resident in a D&E, you would tell them to disarticulate, would you not?

A. Yes.

Q. And if the fetus were alive at the point it emerged up to the torso that disarticulation would be a legal act, would it [1284] not?

A. I wouldn't be performing that procedure if it was a live baby.

Q. Well, can you offer an opinion if another physician were performing that and that situation presented itself where the fetus had emerged in a D&E up to the torso, and then the physician disarticulated, would that be a lethal act?

A. It could be, but it wouldn't necessarily be.

Q. And when would it not be?

A. Well, disarticulation takes several passes, so it is not when you just twist a foot off that the baby is going to die immediately. In fact, it is going to hemorrhage over a period of time. So it will depend on how many other passes you take and disarticulation moves you do.

Q. Well, in this example, it had been removed all the way to the torso. Could you disarticulate at the torso and have the fetus survive?

A. Not for many minutes.

Q. You testified earlier you've only performed D&E 's on demised fetuses; that's correct?

A. Yes, that is correct.

Q. And sometimes those fetuses have been demised for a day or two; is that right?

A. Yes.

Q. I think you mentioned this, but the friability of the fetus [1285] is effected by fetal demise such that it breaks apart more readily when there has been fetal demise; is that correct?

A. Yes, compared to live babies.

Q. And you would agree, would you not, that there is always a risk of damage to the cervix or to the uterus whenever instruments are passed into the uterus?

A. Yes.

Q. It is true that one risk of D&E is that fetal bones may be exposed which presents a risk of puncturing or lacerating the uterus; is that correct?

A. Yes.

Q. And you would agree that removal of the fetus intact during a surgical abortion would reduce that risk, wouldn't it?

A. Yes.

Q. And now I am going to switch gears a bit and talk in general about inductions.

I believe you have talked about two different kinds of inducing agents today, oxytocin or pitocin and prostaglandins, such as misoprostol; is that correct?

A. Yes.

Q. It's possible with oxytocin that the woman can have too many uterine contractions or tetany; is that right?

A. Yes.

Q. And tetany can result in uterine rupture; is that correct?

A. Yes.

[1286]

Q. And you would agree that oxytocin may be contraindicated or at least relatively contraindicated if a women has a previously scarred uterus, would you not?

A. I would say relatively, but not absolutely.

Q. And that would especially be the case if the scar is what is known as a vertical or classical cesarean section scar; is that right?

A. Yes, it could be.

Q. And prostaglandins, like misoprostol, are also contraindicated for a woman who has a prior cesarean section; are they not?

A. Not absolutely, but that is our general practice not to use them.

Q. And you would agree that an induction may not be advisable for some women with serious medical conditions such as a serious heart condition, because the contractions could compromise her cardiopulmonary situation; is that right?

A. That is possible.

Q. And some women may have an allergy to the medicines that are used in induction making that method not appropriate for them; is that correct?

A. Yes.

Q. So, you would agree with me, then, that there may be situations where an induction would not be the optimal form of abortion for a woman?

[1287]

A. There could be.

Q. And you would agree there are certain risks associated with induction; is that right?

A. Yes.

Q. And those include, I believe, chorioamnionitis or infection?

A. Yes.

Q. Excessive blood loss from hemorrhaging?

A. Yes.

Q. And potential rupture of the uterus?

A. Yes.

Q. Inductions are inpatient procedures, aren't they?

A. Yes.

Q. That means they are performed in hospitals, right?

A. Yes.

Q. And the woman is in the hospital the entire time of the procedure; is that right?

A. Yes.

Q. And I think you testified earlier that the average length of time using the medications that you use is—for an induction is between four and 24 hours; is that correct?

A. Yes.

Q. But in your experience an induction has taken as long as two-and-a-half days; is that correct?

A. Yes.

* * * * *

[1294]

* * * * *

Q. If there are two abortion methods, one was a nondestructive method that had greater health risks, and one was a destructive method that is safer—

A. Okay.

Q. —would you support requiring a woman to have the less safe method prior to fetal viability?

A. No.

Q. And you yourself do not take care of some of the most sick pregnant women at the University of Michigan; is that right?

A. I take care of some of them, but not all of them.

Q. Some of them are taken care of by the maternal fetal medicine specialist; is that right?

A. Yes.

Q. And you are not trained in maternal fetal medicine; is that right?

A. Yes.

Q. And, Dr. Shadigian, who is the chair of your department at the University of Michigan?

A. His name is Dr. Timothy R.B. Johnson.

Q. And he is a specialist in maternal fetal medicine; is he not?

A. Yes, he is.

[1295]

Q. And you respect Dr. Johnson as a physician, don't you?

A. Yes, I do.

Q. And you are also aware that Dr. Johnson is a plaintiff in the case pending in New York which challenges the Partial-Birth Abortion Ban Act of 2003, are you not?

A. I am aware of that.

Q. In fact, you have reviewed his expert report, have you not?

A. I believe I have reviewed portions of it.

Q. Well, I am going to show you your deposition, if that is okay with you. Could I ask you to turn to page 68?

MS. CLARK: I am sorry. What page?

MS. KRASNOFF: Sixty-eight. And I believe it is lines—I am on the wrong page—16 to 17.

BY MS. KRASNOFF:

Q. Does that refresh your recollection whether or not you have reviewed Dr. Johnson's expert report in the New York case?

A. I didn't know I needed refreshing. I don't understand the question.

Q. The question that was asked you at the deposition:

> "Have you reviewed Dr. Johnson's expert report?"

And your response was:

> "Yes."

Today you said you only reviewed parts of it. Have you reviewed it all?

[1296]

A. I can't recall how much of which report I've reviewed how much of. I have looked at so many reports. I am sure I reviewed his report. I don't know if I read every "a" and "the," but I reviewed it.

Q. Okay. And are you aware, based on that review, that it's Dr. Johnson's removed?

BY MS. KRASNOFF:

Q. Are you aware based on your review of that report that it is Dr. Johnson's opinion that intact removal of a fetus during a D&E may be safest and most appropriate for terminating a pregnancy for some women?

A. I guess before I would agree to that I would like to see it, because I assume you are reading it from his report, but I don't know that.

Q. Well—

A. I can't remember what he said, exactly.

Q. —if you look at page 172 of your deposition, lines four through eight.

A. Okay.

Q. You were asked:

> "Do you understand that it is his opinion that in some circumstances D&X may be the safest and most appropriate method for terminating a pregnancy?"
>
> And you answered:

[1297]

> "If that is in his report, I did read that."

A. Yes. I still stand behind that. I think I was getting confused between "deposition" and "report," because his deposition is very long.

Q. Yes. And I only asked about his report—

A. Yes.

Q. — which was prior, I believe, to your—

A. Right. That is why I was confused. Thank you.

Q. So you have reviewed the report—

A. Yes. Yes. I certainly have.

Q. —which, unfortunately, I don't have to show you today.

So given Dr. Johnson's participation in New York, you would agree that responsible physicians could reach different conclusions as to the medical appropriateness of banning the procedures covered by the Partial-Birth Abortion Ban Act of 2003; is that true?

A. Yes.

Q. You would also agree there is no consensus in the medical community that the procedures banned by the Partial-Birth Abortion Ban Act of 2003 are not safer for some women in some circumstances than other available procedures?

A. The opinion is diverse.

Q. So there is no consensus?

A. Yes.

* * * * *

[1299]

* * * * *

Q. We discussed an article by Dan Epner, entitled "Late Term Abortion," which was published in a Journal of the American Medical Association in August of 1998.

Do you have that handy up there?

A. Yes.

Q. That article states, in part, quote:

"Intact D&X may minimize trauma to the woman's uterus, cervix and other vital organs."

You agree with that statement, don't you?

A. Yes, it may.

* * * * *

[1303]

* * * * *

Q. And your conclusion that induction is safer is because you believe after 20 weeks induction is safer than D&E; is that right?

A. Mine is based on medical literature, my opinion.

Q. And the medical literature that is available is about D&E; is that right?

A. Yes, it is.

Q. So, it's fair to say that your conclusion that induction is safer is because you believe that after 20 weeks D&E is safer than induction; is that correct?

A. No.

Q. Why not?

A. You said it backwards.

Q. Oh, because I said it backwards? Let's try it again, then.

Is it fair to say that your conclusion that induction is safer is because that you believe after 20 weeks induction is safer than D&E abortions; is that correct?

A. Yes.

Q. In fact, you don't find intact D&E any more objectionable [1304] than D&E, do you?

A. What do you mean by "objectionable"?

Q. If you could please turn to your deposition, page 242, lines 18 to 20.

You were asked:

"Do you find D&X or partial-birth abortions more objectionable than D&E ?"

And you responded:

"No."

A. Yes. I did say that.

Q. Do you believe that?

A. Yes.

* * * * *

[1321]

* * * * *

Q. Dr. Shadigian, you, yourself, will only perform an abortion if the woman is so sick that the only way she is going to survive is to have the pregnancy ended; is that correct?

A. If you mean abortion on a live infant, yes.

Q. Yes, I do mean on a live fetus.

Is that correct?

A. Yes.

Q. And you would agree, would you not, that any physician can't know 100 percent if someone is going to die or not when faced with a very sick pregnant woman; is that correct?

A. That's correct.

[1322]

Q. You would agree that the decision of whether there is a threat to the woman's life must be left to the physician's best medical judgment; is that correct?

A. Yes.

Q. You agree, don't you, that the safest and most appropriate abortion procedure for a particular woman depends in part on the gestational age of the fetus at the time of the abortion; is that correct?

A. Yes.

Q. And you agree, don't you, that the safest and most appropriate abortion procedure for a particular woman depends in part on that woman's health at the time of the abortion?

A. Yes.

Q. And you agree that the safest and most appropriate abortion procedure for a particular woman depends in part on any medical contraindications she might have to a particular procedure or part of a procedure?

A. Yes.

Q. And you agree that the safest and most appropriate abortion procedure for a particular woman depends in part on her prior history of gynecologic surgery?

A. Yes.

Q. And you agree that the safest and most appropriate abortion procedure for a particular woman depends in part on the training, skill, and experience of the physician performing the [1323] abortion?

A. Yes.

Q. And you agree, don't you, that even if two abortion procedures are similar in terms of statistical risks, which procedure will, in fact, be safer for any particular woman depends on her individual circumstances?

A. Yes.

Q. Dr. Shadigian, this is not the first time you've testified in support of a law that regulates abortion, is it?

A. No.

Q. In fact, you have offered sworn testimony of some sort and support of a variety of state laws that relate to abortion, haven't you?

A. I have testified one time in Alaska.

Q. You've offered declarations as well?

A. Expert reports, yes.

Q. And those are sworn statements?

A. Yes.

Q. And you have given deposition testimony as well?

A. Yes.

Q. And that was under oath?

A. Yes.

Q. And so you have offered sworn testimony in support of an Alaska law requiring a minor to obtain parental consent before an abortion; is that correct?

[1324]

A. Yes.

Q. You've offered sworn testimony in support of laws that require mandatory delay before a woman can have an abortion in Indiana, Alabama, and Ohio; is that correct?

A. Yes.

Q. And you testified in favor of a Florida law that required a woman to receive certain state-mandated information before she could have an abortion; is that correct?

A. Yes.

Q. And you've uniformly offered your opinion in support of those laws?

A. In those particular circumstances, I did. Yes.

Q. In addition to the cases we just discussed, you've also offered your opinion in a case brought against Planned Parenthood Federation of America, who is a plaintiff in this case, trying to force Planned Parenthood to inform women seeking abortions that abortion increases the risk of breast cancer; is that correct?

A. Yes.

Q. Are you aware that both the trial court and the court of appeals dismissed that case?

A. If you tell me they did, I am sure they did.

* * * * *

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

No. C 03-4872 PJH

PLANNED PARENTHOOD FEDERATION OF AMERICA, INC. AND PLANNED PARENTHOOD GOLDEN GATE, PLAINTIFFS

v.

JOHN ASHCROFT, ATTORNEY GENERAL OF THE UNITED STATES, DEFENDANT

TRANSCRIPT OF PROCEEDINGS
Tuesday, Apr. 13, 2004
Volume 9

BEFORE THE HONORABLE
PHYLLIS J. HAMILTON, JUDGE

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* * * * *

[1345]

[CURTIS COOK, M.D.—DIRECT EXAMINATION]

THE COURT: All right. Good morning. Are you ready with your next witness?

MR. SIMPSON: Yes, Your Honor.

MS. CLARK: Defense calls Dr. Curtis Cook.

THE CLERK: Please raise your right hand.

Dr. Curtis Cook, called as a witness for the defendant, having been duly sworn, testified as follows:

THE WITNESS: I do.

THE CLERK: Please take the stand.

Please state your name for the Court.

THE WITNESS: My name is Dr. Curtis Cook.

THE CLERK: Spell your last name.

THE WITNESS: C-o-o-k.

[DIRECT EXAMINATION]

BY MS. CLARK:

Q. Good morning, Dr. Cook.

A. Good morning.

Q. Would you please tell the Court what you do for a living?

A. I am a maternal fetal medicine specialist, meaning that I take care of complicated pregnancies, generally complicated by either maternal medical conditions, fetal abnormalities or [1346] obstetrical complications that develop during the course of the pregnancy.

Q. And where do you work?

A. I work in Grand Rapids, Michigan.

Q. At what hospital?

A. I'm based at Spectrum Health in Grand Rapids, but we cover a number of hospitals in the West Michigan area.

MS. CLARK: May I approach, Your Honor?

THE COURT: Yes.

BY MS. CLARK:

Q. I am showing you what has been identified as Defendant's A-4. Is this a copy of your curriculum vitae?

A. It is.

Q. Did you create it?

A. I did.

Q. Does that accurately reflect your education, work experience and publications?

A. I believe that it does.

MS. CLARK: The Government moves to admit into evidence Defendant's Exhibit A-4.

THE COURT: Any objection?

MS. GARTNER: No objection, Your Honor.

THE COURT: Admitted.

THE CLERK: A-4 into evidence.

MS. CLARK: Thank you.

[1347]

(Defendant's Exhibit A-4 was received in evidence.)

BY MS. CLARK:

Q. Dr. Cook, are you board certified in OB/GYN?

A. I am.

Q. Are you board certified in maternal fetal medicine?

A. I am.

Q. And can you explain a little bit more, what is maternal fetal medicine?

A. Well, maternal fetal medicine is a subspecialty area of interest. After completion of obstetrics and gynecology training, you can elect to do further training in a subspecialty area of obstetrics and gynecology.

You can train in the area of female cancers, in the area of infertility or in the area of complicated pregnancies. And generally, that entails another three years of training beyond your residency program to complete that requirement.

Q And what courses of instruction do you go through to become a maternal fetal medicine specialist?

A. During the course of that training you are dealing with the most complicated obstetrical cases. Again, those are complicated by either preexisting maternal conditions which entail a variety of diseases and pathologies, fetal conditions which can entail a number of structural abnormalities or genetic or chromosomal abnormalities, and, then, obstetrical [1348] complications that develop during the course of the pregnancy.

As a result of those complications, you have to learn how to care for women throughout the entire pregnancy, which sometimes entails having to deliver the baby prematurely or end or terminate the pregnancy for the benefit of the mother. And, additionally, it generally includes training in fetal surgery and fetal therapies, as well.

Q. Have you had training in abortion techniques?

A. I have.

Q. What kinds of techniques?

A. We have been trained to find ways to evacuate the uterus in all three trimesters using combinations of medical and surgical approaches.

Q. And what are some of those kinds of surgical approaches that you have been trained in?

A. Well, they include suction evacuation, sharp curettage, dilatation and evacuation, induction of labor with medications, hysterectomy or cesarean delivery.

Q. After you finished your fellowship in maternal fetal medicine, where did you go on to become employed?

A. After I completed my fellowship training I returned to Grand Rapids in West Michigan where I had done my obstetrics and gynecology training and started working there as a maternal fetal medicine specialist.

Q. When did you become employed at Spectrum Health Hospital?

[1349]

A. In 1995.

Q. What do you do at Spectrum Health Hospital?

A. Well, I have various roles and functions, but I serve as the Associate Director for Maternal Fetal Medicine. I also have a teaching appointment with Michigan State University. And previously I helped administer our obstetrics and gynecology residency training program.

We also have teaching positions in two other residency programs in West Michigan, and we serve on the staff of multiple other hospitals in West Michigan.

Q. And as Associate Director of Maternal Fetal Medicine at Spectrum Health, what does that job responsibility entail?

A. Well, there are several areas of responsibility. Obviously, one is just the clinical management of complicated pregnancies. That includes serving a very wide rural area, basically all of western and northern Michigan, where we not only take care of patients referred from that area, but we are also responsible to going out and lecturing and educating physicians in that region about the management of complicated pregnancies.

We also train and supervise the training of our residents in complicated pregnancies, as well as Michigan State medical students.

Then, there are some research and administrative responsibilities, as well.

[1350]

Q. Do you hold a specific position at Michigan State University?

A. Yes, I am an Associate Clinical Professor in the Department of Obstetrics and Gynecology.

Q. And what are your duties, specifically, in that position?

A. Predominantly, the clinical training of medical students from Michigan State, mostly during their third-year obstetrics and gynecology clerkships; occasionally during their fourth-year electives.

We also have some formal lectures that we give that the medical students attend, as well.

Q. Do you teach either residents or medical students about pregnancy terminations in all three trimesters of pregnancy?

A. We do train them how to evacuate the uterus in all three trimesters. Sometimes that involves medical students. Generally, it involves predominantly our medical residents.

Q. Doctor, what kinds of medical conditions in pregnancy do you provide care for, including conditions existing before pregnancy and conditions existing after pregnancy?

A. Well, in the area of just maternal medical conditions, the preexisting conditions can be a host of medical conditions involving one or multiple organ systems.

So it can include central nervous system abnormalities for the mother, cardiovascular problems, pulmonary problems, renal problems, hepatic problems or liver [1351] problems. So a number of preexisting medical conditions there. It can include malignancies. It can include blunt or penetrating trauma to a pregnant woman. It can also include developed—problems that develop during the course of the pregnancy, like heavy bleeding, severe infection, other surgical complications that arise from attempted procedures during pregnancy.

And it can also include the development of obstetrical complications that are unique to pregnancy, like preeclampsia or high blood pressure problems during pregnancy and gestational diabetes, multiple gestation. It can include a whole host of complications.

Q. And what kinds of fetal conditions in pregnancy do you care for?

A. Again, we care for a whole variety of fetal complications that generally can be categorized as genetic or chromosomal abnormalities where a baby has inherited a genetic abnormality or has an abnormal number of chromosomes present. Or generally in the category of structural abnormalities where a baby may have one or multiple organ systems involved.

And then, there are several unique type fetal conditions that we care for, like multiple gestation, conjoined twins, twin-to-twin transfusion, and other sort of unique fetal conditions in pregnancy.

Q. In your practice, do you perform medical procedures on [1352] living fetuses?

A. We do.

Q. Can you describe some of the circumstances in which you perform procedures on living fetuses?

A. We perform a number of medical and surgical procedures on the fetus while it is still inside the womb. This can include trying to correct abnormal fetal heart rate rhythms or heart rhythms.

It can include trying to correct severe fetal anemia. It can include trying to bypass certain structural obstructions in the baby's system, such as the urinary system.

It can include decompressing abnormal fluid collections in portions of the baby.

It can include biopsies or other samplings. So there is a number of different therapies that are developed in the area of fetal surgery or fetal medications.

Q. Are any of these procedures life-saving procedures for the fetus?

A. Most of the ones that we do are, because there are risks associated with doing intrauterine procedures, so generally there has to be a significant benefit in order to accept that level of risk.

Q. Do you also deliver babies?

A. We do.

Q. How many babies do you deliver in an average year?

[1353]

A. On an average year I probably deliver somewhere in the order of 100 to 200 babies.

Q. Is it fair to say that you are delivering babies in the context of high-risk pregnancies?

A. Yes, that would be a fair statement.

Q. Do you receive referrals from OB/GYN's of patients with complicated pregnancies?

A. Yes. Virtually every patient we see is referred from another physician. Sometimes those are nonOB/GYN physicians. But the majority do come from obstetricians and gynecologists.

Q. Why is that the case?

A. It is because they have developed a problem either maternal or fetal that is beyond their level of training or their experience or their comfort level.

Q. What is the gestational age for pregnancies that you typically are involved with?

A. Most often we see patients in the mid-trimester or later, if it is a fetal condition. For maternal conditions, we sometimes see them very early on, such as

diabetics. But certain maternal conditions like pre-eclampsia are late-pregnancy phenomena.

So we get referred patients in all three trimesters that you can generally group, depending on the kind of problem that they develop.

Q. Doctor, you do not perform abortions for elective reasons; [1354] is that right?

A. That is correct. I do not.

Q. Even though you do not perform elective abortions, does your practice require that you have expertise in the safe and effective methods for terminating pregnancy?

A. Yes, because there are times when emptying the uterus or terminating the pregnancy is necessary for the benefit of the mother, so you do need to be familiar with those techniques, and I am.

Q. Doctor, does your practice also require that you may have to end a pregnancy prematurely such that the fetus is likely to die from terminating the pregnancy?

A. I am sorry. Could I have you restate the question?

Q. Does your practice require that you may have to end the pregnancy early such that the fetus is likely to die from that premature termination of the pregnancy?

A. Yes, that is the case at times.

Q. Can you be a maternal fetal medicine specialist without knowing how to end a pregnancy early?

A. I don't believe that you can just because you are dealing exclusively with complicated pregnancies.

Q. Do you, as a maternal fetal medicine specialist, have to have a full understanding of the methods to evacuate the uterus in all three trimesters?

A. I believe that you do.

[1355]

Q. Why is that?

A. Well, again, because the problems that arise in a maternal fetal medicine practice, especially one of our scope and volume, entails finding women that have significant problems in all three trimesters. And sometimes the only correct management in those situations is ending the pregnancy such that the woman can start recovering from the complications that pregnancy poses to their health.

Q. Dr. Cook, does your specific practice involve pregnancy termination?

A. It does.

Q. Have you ever had to terminate a pregnancy when the fetus is still living?

A. I have.

Q. Could you describe to the court the circumstances in which you have had to terminate a pregnancy both previability and postviability?

A. Well, the previability line continues to shift to earlier gestational ages, and currently is approximately 23 weeks gestation. So, the times that we have to terminate a pregnancy prior to 23 weeks has become less and less than it was when viability was 25 weeks or 28 weeks.

But still, probably about 10 percent of the time are women that we care for develop a problem that is

either significantly worsening or nonresponsive to our therapies that [1356] require us to deliver her prematurely, sometimes even prior to 23 weeks.

In our practice, that most commonly results from women that develop very severe hypertensive complications or severe infectious or bleeding complications.

Q. Are there any differences, for example, the doses of medicine in which—in the way in which you perform a termination when the fetus is previable versus postviable?

A. Yes. When we are talking about an infant that is 23 weeks or greater, then there is obviously a fetal interest at play, as well. And we are maternal fetal medicine specialists, so we have at least two patients in any given pregnancy, and sometimes more with multiple gestation.

So we try to effect the delivery in the manner that is safest for the mother, yet still retains the best possibility for a good outcome of survival for the fetus if we are doing it at 23 weeks or later.

If we are doing it less than 23 weeks, obviously the fetal interests have less of a concern, so we might use different types of medications or higher doses of medications or less monitoring of the fetal condition.

There are a number of adjustments we might make in that scenario.

Q. When you are terminating a pregnancy previability, what is your primary concern in performing that termination?

[1357]

A. Our primary concern is trying to find the safest and most expeditious manner to separate the mother from the fetus and the placenta from the mother in order to continue the healing process or recovered process from the pregnancy.

Q. Doctor, what is the most common method of pregnancy termination you currently utilize?

A. Well, in our practice because most of these conditions develop later in gestational ages, our predominant method is medical induction of labor, which offers us multiple other benefits that are somewhat unique to our setting in that it allows us an intact fetus for pathologic evaluation. Allows us to deliver the mother in most safest, most natural or physiologic way in women that typically have significant other medical conditions. And it also allows us to monitor the mothers in the safest manner.

Q. Doctor, how do you perform the induction method of termination?

A. Most often we use prostaglandin, such as misoprostol or prostaglandin E1 suppositories.

Q. How do you administer those prostaglandins?

A. Typically, we administer them as vaginal suppositories.

Q. Do you ever use the instillation method?

A. We do not.

Q. Have you ever had to perform an induction on a living fetus?

[1358]

A. I have.

Q. Does the fetus ever die in the processes of the induction procedure?

A. It does.

Q. How often do you perform induction, both previability and postviability?

A. Well, postviability it is a very regular part of our practice and probably a weekly phenomena when a woman develops a condition whereby we think it is in her best interest to deliver prematurely, meaning less than 37 weeks gestation, but after 23 weeks gestation.

As far as the number that we do prior to 23 weeks gestation, that is a much lesser phenomena, even in our practice. And that may occur one or two times a month.

Q. Why is induction the predominant method of pregnancy termination that you utilize in your practice?

A. Again, it's sort of related to three basic phenomena. One is the gestational age with which we are usually working with, which is usually more than 20 weeks gestation. Also, it has to do with the preexisting maternal medical conditions where we want to try to avoid some of the complications that surgery would pose. So we would prefer a medical or a variation of a normal labor process.

The third would be being able to maximize our ability to evaluate the intact fetus, including an intact [1359] central nervous system after delivery.

There are also some benefits in being able to monitor her labor more accurately when she can

continue to give us feedback about symptoms. We can utilize certain other types of higher technology monitoring during the course of those labor processes.

Q. Between what gestational ages do you perform the induction method of pregnancy termination?

A. Basically, anywhere from 16 weeks until term.

Q. Is it fair to say that you do not oppose having to act to protect women from a serious medical condition even if that means a living fetus might die?

A. I am sorry. Could I have you repeat that one more time?

Q. Is it fair to say that you do not oppose having to act to protect women from a serious medical condition, maternal medical condition, even if that means a living fetus might die?

A. Yes, that is a true statement. We would never sacrifice a mother in order to try to save a fetus, although frequently we don't have to make that choice. Oftentimes, we can support a mother to the point at which her baby has a chance for survival, as well, without posing any increased or significant risk to her health or life.

Q. Have you had an occasion to perform an abortion by a method other than induction?

A. I have.

[1360]

Q. What methods?

A. Well, we have had situations where we have had to evacuate the uterus surgically on infants that no longer are living at that time or have failed other methods of attempted abortion.

We have also done it on situations where we have to use a surgical incision into the uterus, such as a c-section or hysterotomy.

We have also had some situations where we would have to do suction evacuations in unique situations because of pregnancy complications.

Q. Doctor, separate from the distinct methods of abortion that you have performed, have you in your practice ever had to perform an internal podalic version on the fetus?

A. Yes. In the situation of multiple gestations, most often a twin pregnancy where the first child has already delivered and the second child is lying in a transverse position, we will oftentimes have to reach in and turn the baby to a feet first position in order to facilitate the delivery.

Q. Doctor, in your practice have you used osmotic dilators?

A. I have.

Q. In what context?

A. Well, in the days prior to some of the newer prostaglandin formulations, medical inductions were more often done with other types of medications, such as oxytocin or pitocin. In those situations we would frequently try to prepare the cervix [1361] preinduction by placing laminaria into the cervix the day prior to the induction.

Q. Turning to your professional organizations that you belong to, do you belong to any professional organizations?

A. I do.

Q. What are some of those organizations?

A. The American Medical Association, the American College of Obstetricians and Gynecologists, the Society of Maternal Fetal Medicine, Michigan State Medical Society, Christian Medical and Dental Association. There is a number.

Q. You are a co-founder of Physicians' Ad Hoc Committee for Truth?

A. That is correct.

Q. What is or was that group?

A. That was an ad hoc group or an ad hoc committee that eventually grew to over 400 physician educators in the area of complicated pregnancies and pediatric management thereafter who got together specifically for the purpose of trying to correct a lot of the medical misinformation that initially was being circulated regarding this particular procedure.

So the group's focus was solely on trying to provide medical—accurate medical background, position papers on specific details of this procedure. We never addressed other abortion procedures. We never addressed other ethical issues related to life issues, such as embryonic stem cell research or [1362] anything like that.

Q. And is "PHACT" the acronym, correct?

A. That is correct.

Q. Is that still in existence?

A. Well, I haven't been aware of any recent position papers or information that's been circulated from that organization for some time. Initially, there was a lot of activity as we tried to address each of the areas of

medical misinformation one at a time: Did the procedure even exist? How often did it happen? In what scenarios did it happen? Things of that nature. What the potential risks for the procedure were.

As I feel we were successful in sort of clarifying some of those issues, the group really doesn't have a purpose or a role at this point.

Q. Have you written any peer-reviewed articles published in the field of obstetrics and gynecology?

A. I have.

Q. And are those reflected in your C.V.?

A. I believe that they are. Yes. It seems to be fairly complete.

Q. Have you been an investigator in any randomized studies?

A. I have.

Q. Can you briefly describe your experience with being an investigator?

A. Well, research is often done in a collaborative fashion, so [1363] there are some randomized trials where I wrote the protocols, and I presented it to the institutional review board, and I initiated the study from the beginning.

There is others where I joined the process in progress. And there are some where we just became the local site for a multi-site study. So I have been involved in various different levels and various different forms of randomized controlled trials.

Q. Can you provide the court with one example of a randomized controlled study in which you were an investigator?

A. Yes. I am the principal investigator on an ongoing study that we have now that is an institution-specific study, meaning just our institution, looking at the issue of premature labor following early rupture of the membranes and comparing two different treatments for that phenomena to evaluate the eventual maternal and fetal outcomes.

MS. CLARK: Your Honor, defendant moves to qualify Dr. Cook as an expert in obstetrics, gynecology and pregnancy termination.

THE COURT: Any objection or request to voir dire?

MS. GARTNER: Yes, Your Honor. We would like to voir dire this witness.

THE COURT: All right.

MS. CLARK: We would also like to qualify him as an expert in maternal fetal medicine.

[1364]

THE COURT: All right. Thank you.

[CURTIS COOK, M.D.—VOIR DIRE EXAMINATION]

BY MS. GARTNER:

Q. Good morning, Dr. Cook.

A. Good morning.

Q. Sorry. My name is Eve Gartner. We met in Grand Rapids. And how long have you been practicing medicine, Dr. Cook?

A. Well, I graduated from medical school in 1989, and got an institutional license for practicing medicine at that time. I had my first state medical license in Michigan in 1990.

Q. So would you say about 14 or 15 years?

A. I would say more than 10 years, because you are in a training program during some of that time.

Q. So in that 10-plus-year period, you've personally performed between three and five D&E's; is that correct?

A. That I myself have performed, that would be correct.

Q. And none of them involved—that you've performed, none of them involved an extraction of a fetus that was living at the time the procedure was done; is that correct?

A. Right. Most of them involved babies that had been living within 24 hours, but not, that I am aware of, ones who were actually living at the time the procedure was performed.

Q. And you've never performed a D&E at 20 weeks or greater; is that right?

A. Not that I recall, no.

[1365]

Q. And in terms of the D&E's that you've supervised, those have been—there have been less than 20 of those, total; is that correct?

A. That is correct. And my role in some of those was not necessarily supervision. Sometimes it's providing ultrasound guidance and assisting a team of people working on the case.

Q. Okay. And of those 20 or so D&E's in which you either supervised or assisted in some way, fewer than 10 of those involved a fetus that was living at the time of the procedure; is that fair?

A. That would be correct.

Q. And as far as you know, you've never been present for a D&E that took place at 20 weeks or greater?

A. Not that I recall, no.

Q. And you don't consider yourself an expert in D&E techniques between 20 and 24 weeks gestation?

A. No, I consider myself aware and experienced with the various techniques that are involved. I just haven't personally performed them at that gestational age.

Q. Right. So you are not an expert in them, because you have never done them?

A. I am not an expert in performing D&E at 20 to 24 weeks.

Q. You don't even know any physicians that do D&E between 22 and 24 weeks; is that right?

A. I am not sure that is correct, no.

[1366]

Q. You testified earlier about induction abortions that you've done in your practice. Is it fair to say that in terms of inductions where the fetus is living at the beginning of the procedure and the induction is done prior to viability, that comes up in your practice once every few months?

A. No. I think I testified it comes up more than two times a month.

Q. I think that is what you said today, and I wasn't sure if I understood you, because I think in your de-

position you said "once every few months"; do you recall that?

A. I don't recall. I know it is not as frequent as the postviable ones, but I can recall two that I have done in the last couple of weeks.

Q. Okay.

A. So typically it is more like one to two a month.

Q. Okay. Can I just show you your deposition and see if we can clarify what I was misunderstanding?

A. Sure.

MS. GARTNER: Your Honor, do you have a copy of this?

THE COURT: No.

MS. GARTNER: There you go.

BY MS. GARTNER:

Q. Why don't you look at page 258?

MS. CLARK: Which page?

[1367]

MS. GARTNER: 258.

BY MS. GARTNER:

Q. If you want to start looking at page 258, at line 21 through 259, line 3.

A. I am sorry. What line numbers?

Q. I am sorry. 258, line 21 through 259, line 3.

A. Yes. I am sorry. Did you want me to read that?

Q. Just to yourself.

A. Okay.

Q. Just to refresh your recollection.

A. Yes, I did read it.

Q. Did you testify in your deposition that the circumstance of an induction abortion where the fetus is alive at the beginning probably couples up once every few months?

A. Well, the question was:

"Do you do this three or fewer times per year?"

And my response was:

"It's not that small, but it is not a large number."

And then, I mentioned I had done one, as I had, just the weekend prior to the deposition. And I said:

"But it probably comes up once every few months."

Q. Is that your testimony?

A. Well, the number is not continuous in that there may be [1368] some months we do several. There may be months we don't do any. But I think the average would be somewhere between 10 and 20 a year, which would be one to two times a month. It varies from year to year.

It is just not as frequent as the postviable ones.

Q. Okay.

A. And also has become less frequent, I think as I testified, just because the gestational ages are so much earlier. When I started into practice even in Grand Rapids we didn't generally have any babies that survived less than 24 weeks. And even then it was a few number. So oftentimes any induction less than 25 weeks was oftentimes considered a previable induction.

In the last several years we now have obtained a survival rate of 30 to 40 percent at 23 weeks. So sort of by definition we are doing it less frequently than we had in years past.

Q. Okay. And I think you testified that you will only perform an abortion in the case of either fetal demise or where the woman's life is at risk; is that correct?

A. When we think that the mom's at risk for significant medical concerns—it doesn't necessarily have to be immediately life-threatening—then we would end her pregnancy even if it was previable for the baby.

Q. Okay. Now, you have not written any articles about the relative safety of different abortion procedures; is that [1369] correct?

A. No, that's not been my primary research focus.

Q. Okay. And you have not written any articles about abortion other than on the topic of so-called "partial-birth abortion"; is that correct?

A. Again, it is a very broad area of obstetrics and gynecology, and my research focus has been in other areas.

Q. And as far as you know neither of your two or—am I correct you have had three publications in the area of so-called "partial-birth abortion," two or three?

A. Yes, it is just a small number. It's an issue that I was not even asked about until the last few years.

Q. Sure.

A. So my research history predated my even being aware of partial-birth abortion.

Q. Sure. And none of your publications in the area of so-called partial-birth abortion have been in the peer-reviewed literature; is that correct?

A. Well, the two that I am aware of off the top of my head are both in peer-reviewed publications.

Q. And you are referring to the letter to the New England Journal of Medicine?

A. Well, the one journal Issues of Law and Medicine is a peer-reviewed and abstracted and available on Medline. And the New England Journal is also a peer-reviewed journal.

[1370]

Q. Obviously, the New England Journal is a peer-reviewed journal, but your publication, that was a letter to the editor; is that right?

A. Well, you cannot write a letter to the New England Journal and just have it appear like an email or a comment to Time Magazine. It has to be reviewed by the editor. It has to be accepted for its basis in reasonable fact.

It has to be submitted from somebody that has reasonable expertise for an opinion that they think would benefit the readership.

They have a very strict editorial practice in the New England Journal since it is a preeminent medical journal. So you just can't have anyone submit a letter and have it published in the New England Journal of Medicine.

Q. Sure. I understand that. But a letter to the editor is not peer-reviewed in the way that we usually think of a study or some other publication as being

peer-reviewed by a team of physicians who review it and give comments back; isn't that fair?

A. I think probably it's fair to say that it's, you know, reviewed by the editors, but I am not certain that it is sent out for any review other than the editors that are present and the staff at the New England Journal of Medicine.

Q. Okay. And the other publication that you are referring to was an article that appeared in something called the Issues in [1371] Law and Medicine; is that correct?

A. That is correct.

Q. And you are telling me that is a peer-reviewed journal?

A. My understanding is that all publications in that journal are reviewed by outside reviewers.

Q. And are those outside reviewers physicians?

A. I am not certain if they are attorneys and physicians. I don't know. I just know it is a peer-reviewed journal, and I wrote it, and they made suggestions, as all peer-reviewed journals do for editorial content.

And then, you resubmit it, and then they decide they are going to print it.

Q. That was a publication that was co-authored by somebody named James Bopp; is that correct?

A. That is correct.

Q. And Mr. Bopp is well-known as an attorney who litigates on behalf of antiabortion groups, such as the National Right to Life Committee; is that right?

A. Well, that wasn't known to me at the time. I was just asked to help provide medical background for an article, and I agreed to do that.

Q. And did you know that the publication Issues in Law and Medicine is co-sponsored by a group that's called the "National Legal Center for the Medically-Dependent and Disabled"?

A. I did not have a lot of familiarity with this journal, nor [1372] do I to this day, since it is not a journal I generally review on a regular basis. But I have written articles for other journals like Phytochemistry that I don't subscribe to, either.

Q. Sure. I guess I am just trying to understand whether or not it was peer-reviewed.

And did you know that the other co-sponsor of this publication is a foundation called "The Horatio Storer Foundation," which is an affiliate of the National Right to Life Committee?

A. I have to admit you have an advantage over me about the background of this journal. I just don't know the specifics.

Q. Okay. So you don't really know whether it is a peer-reviewed journal?

A. No, I know it peer-reviewed because I had it peer-reviewed.

Q. Okay.

A. I submitted it. It came back with editorial comments from the editors. They asked me to make more comments. I corrected it. I sent it back. It is the same process I have done for The American Journal of Obstetrics and Gynecology, any other journal that I

submitted to. Journal Maternal Fetal Medicine, I go through the exact same process. You are not allowed to know, from my experience with journals, who your outside reviewers are.

They purposely send you back a form of your article without anybody's identification on it. And the reviewers are [1373] not supposed to know who is submitting it to eliminate other biases.

So the process for that journal is the same as the process for every other journal I have written an article for—

Q. Okay.

A. —from my experience.

Q. Now, Dr. Cook, you have not performed any clinical studies or research relating specifically to a method of abortion; is that right?

A. That's right. I think I stated that multiple times: it is not my primary research focus.

Q. I understand that, and I just need to go through these questions to make the record clear.

And you have served generally as a peer-reviewer for medical publications, correct?

A. I have in the past.

Q. Okay. But you have never peer-reviewed an article regarding a method of abortion; is that right?

A. That is correct. Generally, editors will send you articles related to areas that you have previously published in, so most of the articles that I get sent have to do with issues where I have published or done research that is known to the editors, which generally is in different areas.

Q. Sure. And do you plan to offer testimony today about the [1374] safety of a method of abortion that is sometimes called "intact D&X" or "intact D&E"?

A. I do.

Q. Okay. And at your deposition I think you stated that the sources for your understanding of how a so-called partial-birth abortion or intact D&E is performed is limited to Dr. Haskell's paper, Dr. McMahon's paper —I'm sorry. I'm losing my voice—Dr. McMahon's paper and to the ACOG statement of policy on intact D&X; is that correct?

A. Well, my direct experience with this procedure started with reviewing the submitted testimony of two high-profile practitioners of the procedure.

Q. That is Dr. Haskell and Dr. McMahon?

A. That is correct.

Q. Okay.

A. Although, I have subsequently had other experiences where I have been asked to review other people's cases, or in the case of Dr. Haskell, I was asked to review a videotape of him performing the procedure.

So I have had other experiences in that regard. And the elements of the procedure, as defined by the American College, are elements that I do perform in my own practice.

Q. Right. But my question is your understanding of the procedure is based on Dr. Haskell's and Dr. McMahon's descriptions, the ACOG definition, for lack of a better word, [1375] and the videotape you reviewed; is that fair to say?

A. That, and additionally my experience with elements of the procedure.

Q. Okay.

A. My personal experience with elements of the procedure.

Q. Let's talk about those. In terms of your experience with elements of the procedure, I think you testified earlier that you have done internal podalic version techniques. Or I am not sure if that the right word, but—

A. It's is a fair term.

Q. Okay. Is that right?

A. That is correct.

Q. But have you ever done that in the context of an abortion?

A. I have not in the context of an abortion.

Q. Okay. Now, let's talk about the video that you reviewed.

Am I correct that you reviewed that a few years ago in the context of when you were serving as an expert witness in litigation in the State of Missouri?

A. That is correct.

Q. And that video—I am really sorry about my voice—did not include the part of the procedure where the laminaria was either inserted or removed; is that correct?

A. That is correct.

Q. It was just the evacuation part of the procedure?

A. Well, and you could see the manipulation done to bring the [1376] baby down through the cervix. And then, you could see the portion that included the puncturing of the skull and evacuation—

Q. So the evacuation part; is that fair?

A. Well, the evacuation part is the end part.

Q. Oh, okay.

A. There's still the internal podalic version, bring the baby down through the cervix. The only part, as I recall—and it has been a number of years, as you stated—that was not included was the cervical preparation phase.

Q. Okay. And the visualization on that tape was not optimal; is that right?

A. Well, it wasn't as optimal as standing next to the practitioner, but you could see what was going on.

Q. Well, for example, at your deposition when we talked about this, you could not tell me what portion of the fetal head or neck was punctured with an instrument; isn't that right?

A. Well, the nature of the way that the procedure is performed, is the practitioner is placing their hand between the woman's cervix and the baby's head, and so the instrument is passing generally underneath their hand in the base of the baby's skull.

So I could see that it was generally in the area of the base of the baby's skull. You just couldn't see the exact puncture site—

[1377]

Q. Okay.

A. —from the vantage point I had of the video.

Q. Well, when I asked you if it appeared—when I asked you at your deposition if it appeared that it was being inserted in the back of the head or the back of the neck, you told me that you didn't think you could say from memory of visualizing the videotape; and that you had a limited visualization; and it was a number of years ago; and that you would have to see the videotape again, and in some time frame that is closer than several years ago.

Is that—are those correct statements?

A. Well, as I recall the question—and I can review the specific question in the deposition—it was could I see if it was in the neck or the base of the skull.

Well, that is a very narrow anatomic range. That I could see it was generally in that area, but I couldn't tell you if it was closer to the base of the skull or closer to the base of the neck. You could tell it was in this general anatomic area from mid-head to above the shoulders.

Q. Okay. But is it correct, Dr. Cook, that you did have a limited visualization of this videotape?

A. Well, I did not, again, have the visualization you would have if you were standing next to the individual, but you could certainly see what was going on, particularly if you delivered thousands of babies, as I have. It is easy to recognize and [1378] put into context what is going on.

Q. Why don't we go ahead and just look at your deposition on page 235?

Why don't you look at the entirety of your testimony on 235 and top of 236. Just through line 1 on page 236.

A. I think I read what you wanted at this point.

Q. Okay. And when I asked you:

"What portion of the fetal head or neck was punctured with an instrument" at page 235, line 1, did you say:

"Well, the visualization of the tape, as I recall, was not optimal. It was not—it wasn't like there was a zoomed in on just the baby and the perineum, so it's not an optimal situation to make an assessment."

Was that your testimony?

A. Well, the completion of the statement, that is true. But the completion of my answer to that very question was that:

"It appeared to be somewhere in the back of the baby's head."

Q. Okay. And then, did I ask you:

"Did it appear to be in the back of the head or back of the neck?"

A. And, again, the response just prior to that was:

"The baby's spine is up. It is underneath the [1379] operator's hand. I can't narrow the focus more than base of skull, back of neck."

Q. Okay.

A. We are talking now a matter of sonometers separation here.

Q. Sure.

A. So I guess I don't have that amount of precision from my visualization, but it certainly was a baby who was spine up. It certainly was a baby delivered to the level of the after-coming head. And it certainly was a puncture intentionally and volitionally done by the practitioner generally in the area of the back of the baby's neck.

Q. But my questions really, Dr. Cook, are not what happened, but just how—how easy it was for you to actually see what happened given that the videotape, according to your testimony, was not optimal and that it was several years ago.

So let me just ask you: when I asked you in your deposition if it appeared to be in the back of the head or the back of the neck, did you answer on line 12:

> "I don't think I could say that from my memory of visualizing the videotape. I would have to see the videotape again and in some time frame that is a little closer than several years ago."

Was that your testimony?

A. Yes. I just asked—

Q. Okay.

[1380]

A. —that my memory be refreshed by reviewing it again.

But, again, it was quite clear what was going on.

Q. No, my—I am asking you, Dr. Cook, was that your testimony at lines 12 to 15 in your deposition?

A. Yes. I stand by my testimony.

Q. Okay. Thank you.

Now, Dr. Cook, you have not been taught how to perform an intact D&E, have you?

A. I have not been instructed in that procedure.

Q. And you have never taught any of your medical students or residents how to perform an intact D&E, have you?

A. I hardly think it is something I would ever want to teach someone.

Q. Okay. And so the answer is: you have not done so?

A. That is correct. I have not done so.

Q. And you have never supervised someone else performing an intact D&E; is that correct?

A. That is correct.

Q. And you have never personally treated a woman that you were aware had had an intact D&E procedure; is that right?

A. I have been contacted by a person who had the procedure done and had a complication result from that—

Q. But you never reviewed her medical record, did you?

A. She was intending on sending me her medical records and then opted not to pursue litigation, so she did not send me the [1381] medical records, so I did not review her records. I just reviewed her oral relaying of

her medical history to me on a phone—on a phone conversation.

Q. Okay. And you have never personally treated as a physician a woman that you were aware had had an intact D&E?

A. Not that I am personally aware of as being confirmed as an intact D&E procedure.

Q. Right. And, in general, you've never reviewed any medical records relating to an intact D&E procedure; is that right?

A. No, I would not say that is correct.

Q. You have reviewed medical records of people who had undergone an intact D&E procedure?

A. As I was testifying in front of Congress, on other occasions part of the request from the committees that I was to appear before was to review and specifically comment on the medical necessity of this procedure in certain unique—I believe at that time—both fetal and maternal conditions.

And so this included the submitted medical testimony—the submitted testimony of the women's medical history that they relayed in their procedures as a justification for the procedure. I was then asked to review those specific cases and then comment on the necessity of the procedure in those specific cases.

Q. So you commented on women's statements to Congress about why they had particular abortion procedures; is that right?

[1382]

A. Yes. They were quite detailed descriptions of their own medical history.

Q. Those were the women's own accounts. You have not reviewed medical charts of those procedures; is that fair?

A. No, I volunteered to review medical charts if they felt that was necessary. And it was felt not to be necessary at the time.

Q. So just to be clear, you have not reviewed medical charts of women who have had an intact D&E procedure; is that right?

A. Correct. Just personally medical history, not medical charts.

Q. Okay. Thank you.

MS. GARTNER: Your Honor, we don't object to Dr. Cook being qualified as an expert in OB/GYN or MFM, maternal fetal medicine, generally. However, as with Dr. Sprang and Dr. Shadigian, we don't believe that Dr. Cook has the specialized expertise in intact D&E to describe how such a procedure is actually performed.

He hasn't taught the procedure. He hasn't supervised or been taught the procedure. To the exent he has viewed this videotape, we don't believe that his visualization at the time was good enough to really comment on how the procedure was done. Plus, he has testified it was several years ago. And he repeatedly said in response to my questions about it at his deposition that he really didn't recall and [1383] would need to see it again to provide an accurate response.

As the court has permitted with Drs. Sprang and Shadigian, we don't object to his providing his opinion about the safety of this procedure, based on his general expertise in OB/GYN and maternal fetal medicine, but

we would object to his setting forth any detailed descriptions of the procedure other than as necessary for him to provide his views on the safety.

And, of course, that wouldn't come in for the truth.

THE COURT: So I want to make sure I understand. He was offered as an expert in OB/GYN and maternal fetal medicine, as well as pregnancy termination. Your objection only goes to the pregnancy termination aspect, and then only to the extent of his qualifications on the technique of intact—

MS. GARTNER: Of intact D&E. And, actually, Your Honor, as well, we would object to his testifying about the technique of D&E in the 20 week post-time frame since he testified he has never done an abortion using the D&E technique after 19 weeks. And he himself considers himself not to be an expert in D&E from the 20 to 24 week time period.

THE COURT: All right. I understand.

Response?

MS. CLARK: Consistent with Dr. Sprang and Dr. Shadigian, we would go along with him not being qualified as an expert with respect to the specific techniques, but to the extent some of the techniques are consistent with other [1384] practices that he does in his own practice, such as internal podalic version, inserting laminaria, and those techniques, the separate parts, we believe he can testify to those separate parts.

And with respect to the D&E—

THE COURT: I don't know what parts you are talking about other than the podalic version. He didn't testify as to any other aspect.

MS. CLARK: Well, with the internal podalic version and the inserting laminaria, I believe that was his testimony earlier. And that he has performed breech presentation extraction, and the case of when there are twins and other things of that nature.

THE COURT: Well, obviously, as an obstetrician he is going to have to testify on various different aspects of delivery and pregnancy termination within his limited expertise.

But I think his testimony is very clear. He has testified himself that he is not an expert on D&E in the later weeks, that is 20 to 24 weeks, is the question he was specifically asked about. So he will not be qualified as an expert in the question of D&E for 20 weeks plus.

In addition, he will not be qualified as an expert in the technique of intact D&E. And he may testify, however, on either of those procedures to the extent that he has [1385] reviewed other people's descriptions or reviewed the videotape, to the extent he has any recollection of that, in order to opine on the question of the safety of either of those procedures.

Okay. That is it. Please resume your direct.

[CURTIS COOK, M.D.—DIRECT EXAMINATION—CONTINUED]

BY MS. CLARK:

Q. Briefly, Doctor, when did you first hear about the partial-birth abortion procedure? You alluded to this in your voir dire, but if you would go over it with the court.

A. Well, as I can best recollect, the first time it came to my attention was when a physician who at that time was heading up the society of obstetrical anesthe-

sia was called upon to testify specifically about the issue of anesthesia potentially causing the death of the fetus in these procedures.

He was then asked as part of his line of questioning on this area about other specifics related to the procedure that he was not comfortable addressing. And so he mentioned my name as a person who might be able to provide accurate medical background in some of these other areas.

And somehow—I don't remember the details—this led to me helping various different states and various different levels of federal government, as well, in trying to clarify the specific medical information that then led to the development PHACT organization for which I was asked to help [1386] formulate and have sort of a thoughtful, accurate and respected sort of position in order to kind of clarify, again, these medical issues.

So it is hard for me to remember sometimes what happened when. I just somehow found myself where I find myself today.

Q. Briefly, what do you understand the partial-birth abortion procedure to refer to?

A. I understand it to refer to a procedure that was described by Dr. Haskell at a National Abortion Federation seminar, which was essentially identical to the procedure being performed by Dr. McMahon and subsequently acknowledged to be performed by other physicians multiple thousands of times a year in this country, with several similar elements.

Most of those elements include first delivering —or first, I am sorry—dilating a cervix more so than you would with any other abortion procedure, using up

to 25 or maybe even 30 dilators at a time over an one-to-two day cervical preparation period. Then, bringing the woman in, generally on the third day, and converting the baby to a breech position, if the baby is not already presenting in a breech position. Delivering the baby up to the level of the after-coming-coming head.

Then, once the after-coming head is drawn down to the cervix, the base of the skull is then punctured with a [1387] sharp instrument, generally a scissor, and then a suction curette is introduced into the created defect in the base of the baby's skull, and intracranial contents, the brain contents are then suctioned out or evacuated to then cause collapsing of the skull bones to reduce the diameter of the baby's head size to be able to complete the remainder of the delivery.

* * * * *

[1390] with your congressional testimony?

A. They are.

Q. Doctor, what is your opinion as to whether the partial-birth abortion procedure is ever medically necessary to protect the health interest of women facing high-risk pregnancies?

A. I don't believe that it is ever medically necessary. It has even been stated by the College: there is no situation—the American College of OB/GYN—there is no situation where they can think of that this is the only option available.

This is the prevailing thought, that there are other methods that are available, safer, well-established methods. So I don't believe it has anything to offer us in the area of treatment of complicated pregnancies.

Q. Dr. Cook, what is your opinion as to whether the partial-birth abortion procedure presents risks to women undergoing that procedure as compared to other methods of pregnancy terminations?

A. Well, I have grave concerns that elements of the procedure have risks for both immediate complications and long-term complications that I don't feel justify utilizing the procedure when you have other safe procedures available.

Q. Doctor, you testified that you performed quite a few less D&E's in your career than induction; is that correct?

A. That is correct.

* * * * *

[1407]

* * * * *

Q. In comparing the D&E procedure to the partial-birth abortion procedure, in what ways do you understand those two procedures to be distinct procedures?

A. I think the greatest distinction is the amount of cervical dilation that they attempt to achieve with the D&X procedure, being a much greater amount of cervical dilation. Again, using up to 25 dilators over a two-day preparatory period.

The D&E procedures I am familiar with and that I have seen described and that I have performed or observed generally use a lesser number of dilators, usually six or less, and usually for a single preparatory day prior to doing the procedure.

* * * * *

[1412] pregnancies?

A. Well, it is my opinion based upon a number of materials I have reviewed over the years, and my experience in dealing with complicated pregnancies on a daily basis, that there are other safer and readily available alternatives to emptying a uterus in the late second-trimester or even early third-trimester that allow us the optimal ability to care not only for the mother and any complications she may have, but also the optimal ability to get helpful information from the fetus.

In addition, do I not only feel this procedure doesn't offer anything new to what we have available, there are elements of the procedure that concern me for both short-term and long-term potential for complications.

Q. And what are some of those elements of the procedure that concern you in terms of the short-term and long-term risks?

A. Well, in the short-term, whenever you are doing an excessive amount of cervical manipulation or dilation, it does increase your risk for bleeding, laceration and infection.

Whenever you are doing intrauterine manipulation of the fetus to the extent that you are doing an internal podalic version, you increase the risk for complications, such as trauma to the uterus or bleeding or infection. And whenever you are potentially exposing a very vascularized cervix to a collapsing skull, boney skull; there is the potential for increasing risk for bleeding and lacerations as part of some of [1413] the short-term concerns.

Q. And with respect to the long-term concerns that you testified about?

A. In regards to the long-term concerns, they are predominantly focused on the area of this overdilation, massive overdilation of the cervix that concerns me for the ability to maintain the integrity of the cervix for subsequent pregnancies.

Q. And why does the overdilation concern you about future pregnancies —

MS. GARTNER: Objection, Your Honor. We object to the use of the term "overdilation." I don't think there is any foundation for the term "overdilation" in this context.

THE COURT: Sustained.

BY MS. CLARK:

Q. Doctor, when you use the term "overdilation," what did you mean by that?

A. I guess what I mean is manyfold greater than the amount of dilation used for any other abortion technique.

Q. And based on your understanding—

MS. GARTNER: I am sorry, Your Honor. Again, I think there is lack of foundation that there is more dilation in an intact D&E than there is with an induction.

THE COURT: I am going to allow him to testify given his—I certainly heard from other doctors to the contrary [1414] over the last three weeks. I will give the testimony on this issue the weight I believe it is entitled to.

MS. GARTNER: Okay. Thank you.

BY MS. CLARK:

Q. Doctor, when you say "overdilation," what is your basis for believing there is a certain amount—there is overdilation in the D&X procedure compared to other abortion procedures?

A. Well, as I understand the D&E procedure to be described and as I have seen it performed and as I have performed it, we generally would place maybe up to six dilators at a time, or six laminaria.

And by the description of the practitioners who do the D&X procedure they are placing up to 25 dilators at a time. So, to me, that is manyfold more than we would use for any other abortion technique. In the first-trimester we don't use laminaria, generally. We use smaller mechanical dilators where we are dilating generally to somewhere, eight, nine, ten millimeters.

Q. And how does the amount of dilation relate to the long-term complications you were touching on a few moments ago?

A. Well, there's an increasing body of evidence that people who even have first-trimester abortions done suffer an increased risk of premature deliveries, mostly secondary to cervical-incompetence-related issues with subsequent pregnancies.

[1415]

And if they experience that with the relatively smaller amount of cervical dilation required for a first-trimester procedure, then I am necessarily concerned about what experiences they might have when you are dilating at manyfold greater than that.

Q. Doctor, in your opinion and based on your understanding of the D&X procedure, are there any maternal health risks that are unique to the D&X procedure itself that causes you concern with the D&X procedure?

A. Well, the elements are unique in their combination, although different elements are performed in other situations. But the combination of the overdilation or the manyfold more dilation of the cervix, together with the intentional internal turning of a singleton pregnancy in a limited uterine environment, and the potential risk for the collapsing skull, all pose concerns that I think go over and beyond other abortion techniques.

Q. Doctor, how long have you been providing care to women with complicated pregnancies?

A. Well, we started caring for complicated pregnancies at the very beginning of my residency training in 1989, but I am more exclusively cared for only complicated pregnancies from 1993 forward.

Q. Have you ever experienced a clinical situation in which the partial-birth abortion procedure has ever been required or * * *.

* * * * *

[1465]

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[CROSS EXAMINATION BY MS. GARTNER]

Q. Okay.

Okay. Let me ask you this. I think I understand where you are going with what you just said, but in the context of these conditions preeclampsia, HELLP syndrome, serious renal conditions where you are

trying to minimize the risk of blood loss for the reasons that you've explained, one of the reasons that you prefer induction in those situations is that you're not putting instruments in the uterus and you are not putting [1466] the woman at risk of uterine perforation which would cause blood loss; is that a fair statement?

A. I believe it is a fair statement, although it is a complex statement, but I think I agree with all of it.

Q. Did you want me to restate it? Did you follow it?

A. It would be more helpful, maybe, if you say it one more time.

Q. Okay. For those women: preeclampsia, HELLP syndrome, renal conditions where you are trying to minimize the risk of blood loss, one of the reasons you prefer induction for those women if they are terminating is because in the induction method you are not putting instruments in the woman's uterus, so you are not putting her at risk of perforation from those instruments; is that a fair statement?

A. That is a fair statement.

Q. Okay. So if you had a patient with one of those conditions, and you were just focusing on the potential risk from blood loss and no other complication, and if the woman absolutely refused to have an induction abortion, wouldn't you agree that intact D&E would be safer for her than a D&E, specifically in terms of reducing the instrumentation in the uterus?

A. Yes, I assume we are talking about—

Q. At comparable gestational ages?

A. Yes, at comparable gestational ages, then intuitively it [1467] would make sense that anything

that involves less instrumentation would reduce the risk of laceration or perforation.

* * * * *

[1472]

* * * * *

Q. Just to summarize this, you would agree that for some women with cardiovascular conditions under some circumstances D&E may be a superior technique to induction?

A. It may be a superior technique to induction—

Q. Okay.

* * * * *

[1473]

A. —in some special circumstances.

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[1486]

* * * * *

Q. We are going to get to that. I need to—for my questions I need to break it into pieces.

So just it terms of just the instrumentation part, you would agree that with respect to the instrumentation, comparing D&E with intact D&E at the same gestational age, there may appear to be some benefits to intact D&E; is that a [1487] fair statement?

A. As related to instrument passing?

Q. As related only to instrument—the instrumentation in the uterus.

A. Yes, that is true.

Q. And I think you've actually—I think you actually testified in Nebraska that you think that that aspect of the procedure, just the instrumentation in the uterus, would be safer in an intact D&E than a disarticulation D&E; is that correct, at the same gestational age?

A. Intuitively, that would make sense. I don't know of data one way or another on that specific issue.

* * * * *

[1500]

* * * * *

[Q.] Am I correct that a low transverse cesarean section is the most common type of prior uterine scar?

A. That is correct.

Q. And for a woman with that type of scar, the risk of uterine rupture during an induction abortion is approximately 1 in 200; is that correct?

A. Not necessarily. That is the risk of rupture at term for a normal labor process.

Q. Okay. And do you have a sense of what the risk would be at a 20 to 24 week induction abortion?

A. I would suspect it would be less.

Q. I think you also—you consider those to be acceptable risks; is that correct?

A. I do in the situation where you can address the [1501] complication, meaning that OB anesthesia or capability, trained personnel to deal with it.

For instance, a lot of smaller hospitals in the United States are no longer doing VBAC's because they don't have the ability to address even a rare complications very rapidly.

Q. For the record why don't you explain what a VBAC is?

A. I am sorry, a vaginal birth after cesarean delivery.

Q. And it is an acronym, VBAC?

A. It is, yes.

Q. So you are saying that that is a—the risk of uterine rupture is acceptable if you have the capacity to treat the woman after the rupture; is that correct?

A. Correct.

Q. And would that tend to result in the need for a hysterectomy?

A. Not necessarily. Most times we do not have to do hysterectomies for uterine ruptures.

Q. Okay. But obviously it results in some significant blood loss and other complications?

A. It does require additional surgery most times.

* * * * *

[1508]

* * * * *

Q. Okay. And I think what we talked about in your deposition was there would be situations where that occurs where the fetus is delivered to the point of the after-coming head and, if the patient started developing some sort of unstable situation, such as bleeding or infection, then you would recommend progressing to definitive completion of the delivery rather than waiting for her to deliver on her own; is that correct?

A. That is correct.

Q. And you would have several options for how to effectuate that; is that correct?

A. That is correct.

[1509]

Q. And one of those options would be manually delivering the head with forceps; is that—I am sorry—manually. One option would be manually delivering the fetus; is that correct?

A. "Manually" meaning forceps?

Q. Using manipulations with your hands to deliver the head?

A. Yes, that is one option.

Q. Okay. And another option would be using forceps to effect the delivery?

A. That would be another option.

Q. Okay. Now, if you attempted—and then another option would be to make incisions on the woman's cervix; is that correct?

A. An incision. But, generally, those would be after I have tried medical options, first.

Q. Sure. Okay. But in that case where the woman was bleeding or infected and her situation was unstable, if you gave her nitroglycerin and it didn't work fairly rapidly, then you would have to move to another step; is that correct?

A. That is correct.

Q. And in that context, if you couldn't deliver the head with your hands, you would then have to consider either the use of forceps or the use of Duhrssen's incisions; is that correct?

A. That is correct.

Q. Okay. And in your practice when you had the choice between forceps and Duhrssen's incisions, you would probably [1510] choose Duhrssen's incisions; is that correct?

A. It would depend on the clinical situation. If it is a viable baby, I generally would do forceps.

Q. Okay.

A. If it is previable baby, then I might more frequently go to an incision, if all the other elements have failed prior to that.

Q. Okay. And am I correct that when you make the —when you do the Duhrssen's incision procedure, you make anywhere from one to three incisions on the woman's cervix?

A. That is correct.

Q. Okay. And the largest incision you might have to make is maybe 2 centimeters in length?

A. One to 2 centimeters, yes.

Q. And it is the full depth of the cervix?

A. No.

Q. It is not the full depth of the cervix?

A. It is the full depth of the completely effaced cervix. But once the cervix retains its normal length, again, then it makes up a very small portion just the end of the cervix. The normal cervical length in pregnancy is 3 to 4 centimeters.

Q. Okay.

A. Sometimes more.

Q. Okay. Do you want to just take a look at your deposition at page 195? Do you want to look at lines one through six? I [1511] asked you:

"What is the largest incision you have to make?"

And you said:

"Maybe two centimeters in length."

And I asked you:

"How about in depth?"

And you answered:

"It is a full depth, and it is all the way through the cervix, so probably the length is the best way to evaluate how much is there."

Was that your testimony?

A. That was my understanding of dealing with the effaced cervix, what I understood you asked me right now is: what does that represent as a portion of the total cervical length?

Q. Okay. And am I right that you would make that kind of incision with scissors?

A. Usually, yes.

Q. And you've performed this type of procedure, right?

A. I have.

Q. And you believe that a Duhrssen's incision is more gentle than dilation using osmotic dilators?

A. I don't agree with that. Those are not—that is not an option in that situation to use osmotic dilators.

Q. Okay. But in general, in terms of looking at the impact [1512] on the cervix, you believe that a

Duhrssen's incision is more gentle than osmotic dilation; is that correct?

A. In relation to long-term potential complications with the cervix, yes.

Q. Okay. And you believe that a Duhrssen's incision is part of the natural physiologic process; is that correct?

A. Not exactly. What I said was that cervical lacerations occur frequently as a result of a normal labor process, and the amount of cervical laceration that we see is very similar to the controlled surgical incision we make on the cervix.

Q. Did you testify in Nebraska last week that Duhrssen's—you were asked:

"Doctor, is it part of the natural"—

MS. CLARK: Can I get a page number?

MS. GARTNER: Sure. Let me hand this—

THE WITNESS: I think I can answer your question, though. I believe I was asked, you know, "is it more traumatic," and things of that nature.

And I said:

"It is a variation on a normal process," meaning that we actually help the cervix do what it would sometimes do on its own when it causes laceration to facilitate delivery.

BY MS. GARTNER:

Q. Okay. Yes. I think that is what you testified to in [1513] Nebraska.

A. Okay. I am trying to save time.

Q. Okay. So, just to be clear about that, you would agree or you would—you would—it is your opinion that incisions in the cervix that could be up to 2 centimeters long, and there could be anywhere from one to three of them, that doing that type of incision would be more physiologic than osmotic dilation with laminaria?

A. That is correct.

Q. And it is your belief that that type of incision has no implication for the woman's future child bearing?

A. That is correct.

* * * * *

[1517]

* * * * *

Q. But I understand that you would choose induction of labor. But in a situation where, for whatever reason, either patient reference or some overriding medical concern induction was not an option, between 22 and 24 weeks, you do believe hysterotomy is safer than D&E; is that correct?

A. In the clinical scenario you are asking me, yes.

Q. And, again, the hysterotomy would have implications for the woman's ability to have vaginal deliveries in the future; is that correct?

A. Yes.

* * * * *

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

No. C 03-4872 PJH

PLANNED PARENTHOOD FEDERATION OF AMERICA, INC. AND PLANNED PARENTHOOD GOLDEN GATE, PLAINTIFFS

v.

JOHN ASHCROFT, ATTORNEY GENERAL OF THE UNITED STATES, IN HIS OFFICIAL CAPACITY, DEFENDANT

TRANSCRIPT OF PROCEEDINGS
Thursday, Apr. 15, 2004
Volume 10

BEFORE THE HONORABLE
PHYLLIS J. HAMILTON, JUDGE

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* * * * *

[KANWALJEET S. ANAND, M.D.—DIRECT TESTIMONY]

[1540]

THE WITNESS: Thank you.

BY MS. NORONHA:

Q. Good morning, Dr. Anand.

A. Good morning.

Q. Dr. Anand, what is your occupation?

A. I'm a pediatric specialist specialized as a pediatrician taking care of critically ill infants and children.

Q. Doctor, why are you testifying here today?

A. I was requested to do so by the U.S. Department of Justice based on my background and research.

Q. Is there a research in any particular area?

A. Research in the area of development of the pain system and stress responses during fetal and neonatal life.

Q. Dr. Anand, I have handed you what has been marked as Exhibit A-1. What is this document?

A. This is a printout of my curriculum vitae.

Q. Is this an current and updated copy of your C.V.?

A. Actually, this a copy that was printed out in January of this year. And there have been a couple of changes since then.

Q. What changes have occurred since January?

A. Some of the papers that were in press have been published, and also I have received an award from the Broad College of Pediatrics and Child Health in the UK.

MS. NORONHA: Your Honor, at this time I offer [1541] Exhibit A-1 into evidence.

THE COURT: Any objection?

MS. GARTNER: No, Your Honor.

THE COURT: It will be admitted.

THE CLERK: A-1 into evidence. (Defendant's Exhibit A-1 was received in evidence.)

BY MS. NORONHA:

Q. Doctor, where did you go to medical school?

A. I went to medical school in Mahatma Gandhi Memorial Medical in Indore, spelled as I-N-D-O-R-E.

Q. What degree did you receive from that college?

A. I received a degree shortened as MBBS, which stands for Bachelor of Medicine, Bachelor of Surgery. And it's equivalent to the MD degree in the U.S.

Q. Did you do an internship after medical school?

A. Yes. I did a rotating internship at Yeshwantrao Hospital. I will spell that: Y-E-S-H-W-A-N-T-R-A-O Hospital, and at Hindu Rao Hospital. H-I-N-D-U. Next word: R-A-O, Hospital. And that is in Delhi.

Q. Did you also do a residency program in India?

A. Yes. Following this rotating internship through different departments, I came back to the University of Indore, and I was registered and working in a three-year residency program for postgraduate training in pediatrics.

[1542]

Q. Did you complete that program, Doctor?

A. No, I didn't. I completed one year of that three-year program. And then, during that year I had applied for the Rhodes Scholarship, and I received that, and went to Oxford, University of Oxford for a period of one year.

Q. How long were you at Oxford?

A. I was at University of Oxford from October 1982 to November of 1985, so about three years.

Q. What degree did you receive from Oxford?

A. I received what is called a "D.Phil.," or Doctor of Philosophy degree from the Faculty of Clinical Medicine.

Q. Doctor, did you perform any research as part of your studies at Oxford?

A. Yes, certainly. The D.Phil. degree at Oxford is primarily a research-based degree, and I performed research on the hormonal and metabolic responses of newborn infants undergoing surgery and anesthesia.

Q. What was the result of the research that you performed?

A. We had postulated that newborn babies may not be able to mount a significant response, hormonal stress response to a surgical operation. And our initial studies showed that it was the opposite, that babies had a massive hormonal stress response, three to five times that of adult patients undergoing similar types of surgery.

We then designed some studies to look at the effect [1543] of anesthesia on this hormonal stress response. The reason being at that time the standard practice was to perform operations on babies without giving them any pain relief or anesthesia.

And we felt part of the reason that they have a massive hormonal stress response is that they were essentially awake during operative procedures. And so when we did these randomized controlled trials looking at the effects of anesthesia in newborn infants, we found that their stress responses were markedly re-

duced and their complications after the surgery were also diminished.

Q. Doctor, did you do any additional training after you acquired your D.Phil. from the University of Oxford?

A. Yes. After that I moved to Harvard Medical School and Boston Children's Hospital where I did a postdoctoral fellowship in the Department of Anesthesia.

Q. What sort of work did you do in your postdoctoral fellowship?

A. I continued this line of investigation. I was very intrigued by the fact that giving potent anesthesia can reduce complications following surgery. So I wanted to study babies that are critically ill after an operative procedure. And Boston Children's was the one place in the world that had the largest number of babies undergoing open heart surgery.

So we designed some novel anesthetic techniques. [1544] And when we did a randomized controlled trial found that babies who had received the deep anesthetic during open heart surgery had not only significantly less complications, but their survival after the operation had improved.

Q. So were you a member of the Department of Anesthesia at Children's Hospital?

A. Yes, I was. I was at the rank of an instructor at the Anesthesia Department.

Q. Did you do any teaching while you there?

A. Part of my duties, in addition to the research, involved giving lectures or doing journal club or other

things for anesthesia residents and fellows who were in the Department of Anesthesia at that time.

I also did a Biostatistics course for helping develop their research skills in the anesthesia field.

Q. Doctor, where did you go after you completed your postdoctorate research fellowship at Children's Hospital?

A. I applied for residency programs to train in pediatrics, and I was matched at Boston Children's Hospital. So I did a three-year residency training in pediatrics after this fellowship.

Q. Were you also at Massachusetts General Hospital?

A. Yes. At the completion of my residency training in pediatrics I went to subspecialize in the area of Neonatal and Pediatric Intensive Care, and so I moved to Mass. General [1545] Hospital, still within the Harvard Medical School System, to do a clinical training fellowship in the pediatric and neonatal ICU's at Mass. General.

Q. What did you do after you completed your work at Massachusetts General Hospital?

A. I spent many years in postgraduate training. And it was time to find a job. I was appointed as Assistant Professor of Pediatrics Anesthesiology and Psychiatry at Emory University in Atlanta.

Q. Did you do any research while you were at Emory?

A. Yes, I did. I continued this line of research, because I had convinced myself, at least, that premature and full-term newborn infants are sensitive to pain.

I designed some analog models to look at the long-term effects of pain during early life, as well as design some novel ways of giving pain relief to premature and full-term infants.

Q. Did you also care for patients while you were at Emory?

A. Yes. While at Emory I was also a pediatric intensivist, which means I was taking care of critically ill children in the pediatric ICU at two different hospitals. One was Egleston Children's Hospital, which is E-G-L-E-S-T-O-N, and the other was Hughes Spaulding Children's Hospital, both in Atlanta.

Q. Doctor, when did you leave Emory?

A. I left Emory in September of 1997 and moved to University [1546] of Arkansas for Medical Sciences.

Q. Is that where you are presently?

A. That is where I am at present.

Q. What is your present position at the University of Arkansas?

A. I'm currently a Professor of Pediatrics, Anesthesiology, Pharmacology, and Neurobiology at University of Arkansas for Medical Sciences. I also work at Arkansas Children's Hospital as a pediatric intensivist, and on the sedation service at Children's Hospital.

Q. So what sort of work do you do as a practicing pediatric care intensivist at the Children's Hospital?

A. My clinical work includes taking care of infants and children who are severely ill from multiple different illnesses and are admitted to the pediatric ICU at Arkansas Children's Hospital.

I also work on a sedation service which provides deep sedation and light anesthesia to children all over the hospital whenever they are undergoing any kind of procedure.

Q. So do you administer anesthesia to your patients?

A. Yes. Part of my training as an intensivist includes the use of sedative anesthetic and analgesic drugs.

And on the sedation service, in particular, I act as an anesthesiologist doing a preanesthetic evaluation, providing the anesthesia, and then doing a postanesthetic evaluation the [1547] Children's Hospital.

A. Doctor, are you a board certified anesthesiologist?

A. No, I am not.

Q. Well, what is the difference between what a board certified anesthesiologist does and what you do?

A. There is some degree of overlap in the training of critical care specialists and anesthesiologists. The anesthesiologist provides anesthesia in the operating room, and uses a multitude of different techniques, some of which are applicable outside the operating room, as well.

The intensivist is primarily concerned with providing sedation and analgesia for invasive procedures, either in the ICU or as we do as part of the sedation service.

So there is a little bit of overlap between the two fields.

Q. You also mentioned that you have an adjunct appointment in the Department of Anesthesia at the University. What do you do in that capacity?

A. I help with the training of residents and fellows in the Department of Anesthesia. But this is, again, because this is within the same medical school, when I am teaching pediatric residents and fellows, there will be in the same lectures or journal clubs there will be the anesthesia residents and fellows included in that.

Many of the anesthesia fellows will rotate through [1548] the pediatric ICU. And in that capacity I help train them in the care of critically ill children.

Q. Doctor, what is the Pain Neurobiology Laboratory at Arkansas Children's Hospital?

A. This is a laboratory that I am the Director of the Pain Neurobiology Lab at the Research Institute. And the focus of this lab is performing research on the short-term and long-term effects of pain, particularly in animal models of fetal and neonatal pain.

Q. What sort of research are you presently conducting in those areas?

A. There are several clinical and experimental studies underway right now. Clinical studies include a multinational randomized clinical trial, for which I am the study chairman, where we are coordinating the efforts of 16 different centers and looking at the effects of morphine given as pain relief in premature infants who are ventilated.

There are a couple of other minor clinical studies, as well.

On the experimental side, we are performing research on the impact repetitive pain may have on the

development of the brain, looking at cell death within the brain and looking at some anesthetic and analgesic drugs that can eliminate some of the long-term detrimental effects of pain.

This is performed primarily in a rat model of [1549] neonatal pain.

Q. Doctor, are you presently conducting any clinical studies on pain in the human fetus?

A. No, I am not.

Q. Have you ever participated in such studies in the past?

A. While I was at Oxford I was involved somewhat peripherally in two studies that were ongoing at that time. I am a co-author on one of the publications that resulted from one of those two studies, but I did interact with those researchers, review the protocol and help in the interpretation of their results.

Since then, I have not had any—I have not performed my own research on fetal—in the fetal setting.

Q. Doctor, are you board certified in any medical specialty?

A. I am a Diplomate of the American Board of Pediatrics and the Subboard of Pediatric Critical Care Medicine.

Q. Where are you licensed to practice medicine?

A. In the State of Arkansas.

Q. Approximately how many articles have you published?

A. As listed in this C.V., there is about 200 articles that have been published.

Q. Have these articles addressed the topic of fetal pain?

A. To some extent they have. A few articles have focused on the early development of the pain system and have addressed the question of consciousness as it develops during fetal and [1550] neonatal life, and have included subsections on fetal pain and fetal consciousness.

Q. Doctor, do you perform any peer review of scientific papers?

A. Yes. Certainly I do. I am on the editorial board of a journal called Critical Care Medicine. And up until December of last year, I was also on the editorial board of a journal called Biology of the Neonate.

In addition to these editorial appointments, I perform peer review of papers submitted to multiple different journals: Anesthesiology, Analgesia, American Journal of Obstetrics and Gynecology, the neuroscience journals and a large number of pediatric journals, as well.

Q. Doctor, what is the Maternal Fetal Research Network of the NIH?

A. This is a research network that is funded through the National Institute for Mental Health and is a multidisciplinary group of researchers that are focused on studies of fetal physiology, neonatal physiology, and the impact of maternal stress or perinatal adverse experiences on long-term outcomes.

Q. And you are a member of this network?

A. Yes, I was invited to be a member of this network.

Q. Doctor, have you ever testified as an expert witness before?

A. During the course of my clinical work I have testified as a [1551] fact witness in a number of cases, but in the process of reviewing my credentials I was classified as an expert in the area of pediatrics and pediatric critical care in some of those.

There is one other case in the last four years where I was invited as an expert on the pharmacology of anesthesia and analgesic drugs.

Q. Have you ever testified in a case involving abortion procedures, aside from the three cases in which you have testified regarding the Partial-Birth Abortion Ban Act of 2003?

A. No, I have not.

MS. NORONHA: Your Honor, at this time we offer Dr. Anand as an expert in the areas of fetal biology—fetal neurobiology—excuse me—fetal pain and the pharmacology of anesthetic drugs.

MS. PARKER: Your Honor, if I might, I would like to do some voir dire.

THE COURT: All right.

[KANWALJEET S. ANAND, M.D.—VOIR DIRE EXAMINATION]

BY MS. PARKER:

Q. Good morning, Dr. Anand. Nice to see you again.

A. Good morning, Ms. Parker.

Q. As I understand it, you are a pediatric intensivist; is that right?

A. That is correct.

[1552]

Q. You are not an obstetrician?

A. No, I am not.

Q. And you are not a gynecologist?

A. No, I am not.

Q. In fact, other than as a medical student, you have no training in either obstetrics or gynecology?

A. That is correct. My training was during my medical school days, as well as during the rotating internship that I had completed in India.

Q. But since then you have no training in obstetrics or gynecology?

A. Absolutely right.

Q. And you have never performed an abortion procedure?

A. No, I have not.

Q. You have never written any articles about abortion procedures?

A. That is correct.

Q. And you've never conducted or participated in any studies on any method of abortion, have you?

A. That is correct.

I have not participated in those kinds of studies.

Q. And before you spoke with counsel for the government in this case, you thought the Partial-Birth Abortion Ban Act of 2003 covered the vast majority of procedures for abortions; isn't that right?

[1553]

A. Yes, that was my somewhat ignorant impression.

Q. But counsel for the government told you that the procedure that the Act banned was the dilation and extraction, or D&X procedure; is that right?

A. Yes, they did. And after that initial telephone contact, I received a copy of the Act, and I read through that, and then informed myself as to what it is all about.

Q. But before that conversation and receiving a copy of the Act, you didn't have much of an understanding of the intact D&E procedure; isn't that right?

A. That is right, if the intact D&E procedure is what you call the D&X procedure.

Q. In fact, I think you told me at your deposition you went on Google to look for information about it?

A. You're absolutely right.

Q. And your understanding even now is only rudimentary?

A. I agree with that.

Q. So you've never performed an intact D&E procedure?

A. No, I have not.

Q. Never observed one happening?

A. No, I have not.

Q. And you don't consider yourself an expert on that procedure?

A. You're absolutely right. I don't consider or claim to be an expert in that procedure.

[1554]

Q. I also think on direct you indicated that you're not an anesthesiologist?

A. I am not a board certified anesthesiologist.

Q. You have never had a board certification in that specialty area; is that right?

A. That is correct.

Q. You are not a member of any professional organization relating to anesthesiology?

A. No, I am not.

Q. You are not trained or certified to deliver anesthesia to patients?

A. I do deliver anesthesia to patients under my certification as a pediatric critical care specialist.

But those are overlaps between the functions of a pediatric intensivist and an anesthesiologist.

Q. But you don't do that in the context as an anesthesiologist?

A. I do that as a practicing clinician at Arkansas Children's Hospital.

MS. PARKER: Your Honor, may I approach the witness?

THE COURT: Yes.

BY MS. PARKER:

Q. Dr. Anand, if you could take a look at your deposition which occurred February 17th at page 214. And I would like to direct your attention to lines three through 10. And there you [1555] are asked in response to a question by your counsel that said:

"Dr. Anand, earlier Ms. Wigmore asked you whether you were an expert in anesthesiology, and you said that you were not an expert in anesthesiology. What did you mean by that?" And you responded:

"Simply means that my expertise is in the pharmacology of anesthesia and analgesic drugs, but I don't practice as anesthesiologist, and I'm not trained or certified to deliver anesthesia to any patients."

Do you see that?

A. Yes, I certainly—could I direct your attention to page 44 of the same deposition?

THE COURT: This is a bit unusual.

MS. PARKER: Yes. I think I am the one who gets to ask the questions, Dr. Anand.

THE WITNESS: Your Honor, the deposition occurred—

THE COURT: Well, first of all, this is a voir dire procedure. She is testing the extent and scope of your qualifications. Counsel for the government will have an opportunity to draw our attention to any other pages of the deposition that are pertinent.

THE WITNESS: Certainly, whatever you desire.

BY MS. PARKER:

[1556]

Q. So you currently don't act in the area of obstetric anesthetics; is that right?

A. That is correct.

Q. And you have not conducted any studies measuring the effects of anesthesia on fetuses; isn't that right?

A. That's right.

Q. You don't consider yourself to be an expert in anesthesiology; isn't that right?

A. That is right.

Q. You indicated that you spend some part of your time working with the Department of Anesthesiology at the University of Arkansas, I believe?

A. Yes, I have an adjunct appointment in the Department of Anesthesiology, but my primary appointment is in Department of Pediatrics.

Q. In fact, you spend 99 percent of your time in the Department of Pediatrics; isn't that right?

A. I think it is 99 percent of my effort, rather than my time. And that part of that effort also subserves the functions of the Department of Anesthesiology or Pharmacology or Neurobiology.

As an example, suppose I apply for an NIH grant and I receive an NIH grant, the grant total will be included in the research funding for Department of Anesthesiology, as well as my primary department, which is Department of Pediatrics.

[1557]

Q. But at your deposition you told us that you spend less than 1 percent of your time in the departments other than the Department of Pediatrics; isn't that right?

A. Less than 1 percent of my effort, not time.

Q. Okay.

A. And—

Q. And all of your salary comes entirely from the Department of Pediatrics; isn't that right?

A. Absolutely right.

Q. So, Dr. Anand, you also claim to be an expert in fetal pain; is that right?

A. Yes, I do.

Q. But you are not currently conducting any research on pain in the human fetus; isn't that true?

A. That is true. I am not currently conducting any research in the area of fetal pain, although during my entire research career I have closely followed the literature pertaining to fetal pain over the last 20 plus years.

And I have frequently served as a reviewer for studies that have looked at fetal responses to pain.

Q. But you yourself are not currently conducting any research on fetal pain?

A. You're right.

Q. And all the research you are currently conducting is on animal models or pre-term infants or neonates; is that right?

[1558]

A. That is right.

Q. And, in fact, all of the research you have conducted in the past has focused on newborn infants; isn't that right?

A. Except as noted above in relation to the studies I have participated in University of Oxford, all of my research has been in animal models of neonatal pain and pre-term infants.

Q. But there is a huge difference between pre-term infants and fetuses; isn't that right, in terms of their experiential contacts, the physiological differences and differences in terms of their environment?

A. You're absolutely right.

Q. And the doctoral thesis you just mentioned also involved premature infants; isn't that correct, not fetuses?

A. Yes, premature infants and full-term infants.

Q. It did not focus on fetal pain or fetal anesthesia?

A. It did not focus on fetal pain or fetal anesthesia.

Q. In fact, the only work on fetal pain that you have done is a study you participated in peripherally while you were at Oxford?

A. Yes. Like I mentioned before, there were two studies that I participated in.

Q. That was over 20 years ago; isn't that right?

A. Yes.

Q. And one of those studies was by a Joachim Partsch; is that right?

[1559]

A. That's right.

Q. Your role in that study was simply to review the study protocol at departmental meetings and helping interpreting the results; isn't that right?

A. That is correct.

Q. You weren't an author on that publication?

A. I was not a co-author on that publication.

Q. And the second study you participated in also occurred in the 1980's; isn't that right?

A. That's right.

Q. And that is the study you indicate you were a co-author on?

A. Yes, I was the second author on that publication.

Q. But that study did not conclude that a fetus feels pain, did it?

A. No, it wasn't designed to look at the question of fetal pain.

Q. So it wasn't even designed to investigate the question of fetal pain?

A. That's right. At that time fetal or neonatal pain had simply not been addressed in any medical research that I'm aware of.

Q. So the two studies you participated in in the 1980's didn't really look at the whole issue of fetal pain. And since the 1908's [*sic*], you have not participated in any studies on fetal pain; isn't that right?

[1560]

A. I have not performed any studies on fetal pain since the 1980's, you're right.

Q. Are you aware of any studies of fetal pain during the intact D&E procedure?

A. I am not aware of any such studies.

Q. Are you aware of any articles on fetal pain during the intact D&E procedure?

A. That topic to the best of my knowledge has not been researched or published as yet.

Q. So in making the opinions you intend to give today you are not relying on any studies or articles on the pain a fetus might experience during an intact D&E procedure; isn't that right?

A. That is right. Such information is not available in the medical literature.

MS. PARKER: Your Honor, we would object to the qualifications of Dr. Anand in—as an anesthesiologist and as to fetal pain under Federal Rule of Evidence 702, because Dr. Anand does not have the knowledge, skill, experience, training or education to testify in these two areas.

As to anesthesia, by his own admission, Dr. Anand is not an expert. He does not practice in this area. He is not trained in this area, and he has not done research on the area of fetal anesthesia.

THE COURT: I have a question in that regard. The [1561] doctor has indicated that he believes himself to be an expert in the pharmacology of anesthetic drugs and not anesthesia, per se, because he is not a certified anesthesiologist.

What is the difference between those two?

THE WITNESS: Your Honor, all of my research has been focused on the effects of anesthetic and analgesic drugs during early life in the developing brain and in the stress responses.

I have authored many articles on that subject. In fact, for the last two board congresses of pediatric and neonatal intensive care, I was the chairman of the pharmacology track within those board congresses.

My area of research is well-recognized as seminal in the area of anesthetic analgesic drugs during early life.

MS. PARKER: We do not object to his testifying about the pharmacology of anesthetics. But to the extent he wants to provide testimony about the impact or effect as a result of an anesthetic procedure, we would object to that.

THE COURT: Counsel indicated he was being offered as an expert in the pharmacology of anesthetic drugs, fetal pain and fetal neurobiology. And your objection is to testimony as an anesthesiologist, which doesn't appear to me that is what he has been called to give; is that correct?

MS. NORONHA: That is correct, Your Honor.

THE COURT: All right.

[1562]

MS. KRASNOFF: As long as that is clear when he starts providing his opinions, because we believe his opinions go over to the general area of anesthesiology.

THE COURT: I am sure you will point that out to me.

MS. PARKER: As to fetal pain, Dr. Anand admits he has done no research and written no articles on fetal pain. He has testified about his expertise in pain and stress responses, but not fetal pain, in particular.

While we have no objections to his testifying about his research and the judgments he makes based on his research, we object to the characterization of that as fetal pain.

THE COURT: Okay. All right. Response?

MS. NORONHA: Your Honor, may I—

THE COURT: Do you wish to respond or ask any voir dire on that?

MS. NORONHA: May I ask further questions before responding?

[KANWALJETT S. ANAND, M.D.—DIRECT EXAMINATION CONTINUED]

BY MS. NORONHA:

Q. Dr. Anand, first of all, you had wanted to explain some testimony in your deposition on page 44. Would you like to do that now?

A. Yes, counsel. The reason why I said that is because my deposition was abnormal insomuch it was obtained by two different counsels, Amy Wigmore and Beth Parker. And so there [1563] was a considerable degree of repetition of questions. On page 44, I would refer to lines six through 23 where I have described that there is a considerable degree of overlap in what I do for Department of Pediatrics and the missions and goals of these other departments.

So if I have published papers that are focused on neonatal pharmacology or I have obtained grants for studies that are designed for neonatal pharmacology or neurobiology, the information in here, then those activities—

THE COURT: Slow down, please.

THE WITNESS: Sorry. I apologize. Then those activities are listed as part of those the other departments, as well. So all of my salary support comes from Department of Pediatrics, and that's where my primary allegiance and effort is directed.

As for these other adjunct departments, yes, I will occasion provide services, as and when requested by those department heads. It's not, you know—there is no way of sort of classifying person effort to this department or that department, because what I do for Department of Pediatrics also helps the teaching in the Departments of Anesthesiology and Pharmacology and Neurobiology.

BY MS. NORONHA:

Q. Doctor, you stated you haven't conducted any studies yourself on fetal pain recently. How are you then able to [1564] opine on the subject of fetal pain if you yourself have not conducted some of those studies?

A. I have maintained a scholarly interest in the area of fetal pain and the development of the pain system during early life. The first time that fetal pain ever came into consideration in the medical literature was an article that was published in November of 1987 in the New England Journal of Medicine, which was titled "Pain and its Effects in the Human Neonate and Fetus."

Since then, multiple other articles have focused on this area. And although I haven't designed any original research protocols, I have served as a reviewer for the publications and protocols that other people have submitted, either for publication to journal or for grant funding at the NIH level, and, therefore, continuing my interest in fetal pain.

I have also served as a member of the editorial board of Biology of the Neonate, which is a journal that is focused on fetal and neonatal physiology. And as a member of the editorial board, I frequently reviewed papers on fetal pain and fetal stress responses.

Q. Doctor, you have conducted studies yourself on the subject of pain in pre-term neonates, right?

A. That is correct. Even my current research is focused on premature neonates all the way from 23 weeks of gestation [1565] onwards. And I frequently participate in those research studies in the collection and interpretation of data related to pain in pre-term babies. Insomuch that the physiology of the fetus and the premature neonate may be different, but the patterns of physiological responses to pain are very similar in the pre-term neonate as they are in the fetus.

There is a considerable degree of overlap that I would like to postulate.

MS. NORONHA: Thank you, Doctor.

Your Honor, the only thing I would like to add is that Dr. Anand has been qualified as an expert in these three areas before Judge Casey in New York. And although Judge Kopf in Nebraska does not particularly qualify experts, he did hear Dr. Anand's testimony.

THE COURT: Thank you.

All right. Anything else?

MS. PARKER: Yes, Your Honor. I believe that counsel also wanted to certify him as an expert in fetal neurobiology, but I do not believe he testified during his direct on any expertise in the area of fetal neurobiology. And in fact, he's testified his expertise is in care of

children, critically ill children and pre-term neonates, which are quite different than fetuses.

THE COURT: That is correct. You haven't elicited any information that would lead me to qualify him in that area [1566] do you wish an opportunity to do so?

MS. NORONHA: Yes. Thank you, Your Honor.

BY MS. NORONHA:

Q. Dr. Anand, I believe you stated you were familiar with the development of the pain system in early life. Can you explain how that is applicable to the fetus?

A. Certainly. The pain system starts developing very early in gestation from about six or seven weeks of gestation.

MS. PARKER: Your Honor, I am sorry to object at this time, but it appears he is now going to start providing his opinion, and he has not yet been qualified. So we think it is inappropriate for him—

THE COURT: I think that is what she is trying to get at, correct? We need to determine first if he is qualified. He has not told us anything about his background in fetal neurobiology.

MS. NORONHA: That is correct, Your Honor.

BY MS. NORONHA:

Q. Go ahead, Doctor.

A. Therefore, I have looked at the development of the pain system and have synthesized the data pertaining to fetal development of the pain system. This also has a major context in terms of developing—

THE COURT: If I can stop you for a moment. Maybe you start at the beginning. What is neurobiology as it applies [1567] to fetuses?

THE WITNESS: Certainly, Your Honor. Neurobiology is the discipline for the study of the central and peripheral nervous system. The central nervous system comprising of the brain, the brain stem and the spinal cord. There is the peripheral nervous system, includes the nerve fibers and the receptors located in the skin, mucus membranes and other organs.

And that's the discipline of neurobiology.

THE COURT: How are studies conducted on fetuses?

THE WITNESS: There are different ways of looking at the neurobiology of the fetus. Primarily through animal experiments or through fetuses that were the result of abortions. And a lot of the early research was done on fetuses that were obtained during abortions.

So, those are some of the studies that I have reviewed. There are also current studies ongoing that look at physiological responses in the fetus when it is subjected to a painful stimulus or painful experience.

And I have served as reviewer for those studies. I have been invited to write editorials on the subject of fetal neurobiology. I have published several articles that deal with the development of the brain and the impact of pain on this development.

THE COURT: All right. So you have not conducted [1568] any of the studies yourself?

THE WITNESS: You're right. I have not conducted those studies myself.

THE COURT: All right. Anything else?

MS. NORONHA: I have nothing further, Your Honor.

THE COURT: All right. Anything else from you, Ms. Parker?

MS. PARKER: No, Your Honor.

THE COURT: All right. On the three areas in which he has been offered, I find that the plaintiffs' arguments pretty much go to the weight to be assessed and to be assigned to his testimony in this regard, more so than the qualifications. I will permit him to testify as an expert in all three areas.

MS. NORONHA: Thank you, Your Honor.

BY MS. NORONHA:

Q. Dr. Anand, I would like to turn now to the definition of pain. Would you please give us a definition of pain?

A. Pain is defined as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

Q. Doctor, what is the source of that definition?

A. This is the official definition that was proposed by the International Association for the Study of Pain. They have a committee on taxonomy that decides the definition of various * * *.

* * * * *

[1572] to paralyze them, there will be the perception of pain, but there will be no reaction to pain, no behavioral reaction to pain, as such.

There are other situations, altered states of consciousness where there can be perception of pain, but no overt reaction to pain.

Q. Doctor, there is another note under the definition of pain that states that:

"Pain is always subjective."

What does that mean?

A. It means that pain has special meaning and significance for the living being that is experiencing the pain. It pertains to the subject that is undergoing that experience, the subject of that experience.

I would like to add, if I may, that every experience, not only pain, is, in essence, a subjective experience. Even people who undergo the same experience have a very individual experience that is special to that individual.

So pain, as well as all other experiences, are entirely subjective.

Q. Doctor, now, I would like to turn to fetal pain. Do you have an opinion as to whether the fetus feels pain?

A. Based on multiple lines of evidence I believe that fetuses beyond 20 weeks of gestation have the ability to feel pain.

Q. Could you generally tell us what you mean by "multiple * * *.

* * * * *

[1585]

And other studies have looked at the sense of smell, for example. There was an experiment done

where pregnant women were asked to take a capsule, which was tasteless and odorless, but contained crushed cumin—cumin is a herb—within the capsule.

And after the babies were born, they were exposed to the scent of cumin versus the scent of citron, which a lemony scent versus another uncharacterized scent, and they had a calming and orienting response to the smell of cumin, so that it shows that there are different lines of evidence to show that the brain is actually functioning. It's doing something. And all these sensory systems are developing during fetal life.

Q. Doctor, now let's turn to the physiological indicators for pain that you mentioned. What does "physiological" mean?

A. "Physiological" pertains to changes in the physiology that may occur as a result of the response to pain. And these areas have mainly been looked at in terms of hormonal and circulatory responses to pain.

Q. Are their studies that have shown these hormonal and circulatory responses to pain?

A. Yes. There is a consistent and well-developed line of investigation followed for the last 10 or 15 years that has shown consistent responses with the release of hormones and changes in circulation in response to painful stimulation.

Q. And how early have these responses been exhibited in the [1586] fetus?

A. The earliest response that has been reported in the literature is from about a fetus of 16 weeks of gestation. But most of these responses are robust and reproducible after 20 weeks of gestation.

Q. Doctor, would you describe briefly for us the study performed on stress hormones?

A. Certainly. One of the leading researchers in this field is someone by the name of Dr. Nicholas Fisk from Imperial College, London.

And he has published several studies where fetuses who required a blood transfusion in utero were given the blood transfusion using two different approaches. One approach is to give the blood transfusion at the insertion of the umbilical cord where you can advance the needle into the umbilical vein and give a fetal blood transfusion to the fetus.

In some situations if the fetus is positioned in a way that the fetus seems to be covering the placenta, then access to that area is limited or is impossible. And so an alternative method is to introduce the needle through the abdominal wall, through the fetal body into the abdominal wall, across the peritoneal cavity into the capsule of the liver. And then place the needle in a vein that lies within the liver. It's called the intrahepatic, and to transfuse through that vein.

[1587]

When the responses of fetuses are compared between these two different approaches, one is a painful approach, the intrahepatic vein, and the other is a nonpainful approach, through the umbilical cord, because the umbilical cord doesn't have any sensory nerves.

What they found were robust hormonal responses that occurred as a result of transfusion through the intrahepatic vein. These hormonal responses were characterized by measuring levels of beta endorphin and found five to sixfold increases in this hormone,

characterized by the release of catecholamines, horones such as adrenalin and noradrenaline, and up to two or threefold increases occurred. And the release of cortisol, which is another stress hormone released. And this was released in response to the painful approach using the intrahepatic vein.

What was also remarkable was that the magnitude of this hormonal response was directly correlated with the duration of painful stimulation. So not only is the fetus able to respond to pain, but can respond to different durations of the painful stimulus.

Q. Doctor, you mentioned there was also a study performed a circulatory stress responses. Would you briefly describe that study, please?

A. Certainly. Several studies have looked at circulatory responses in the fetus and primarily have seen changes in blood [1588] flow to the brain that result during a painful stimulus. For example, there is a decrease in what is called the pulsatility index of the middle cerebral artery. This is an artery that supplies the sensory area of the brain, and which implies that following painful stimulation an increase in blood flow occurs to that part of the brain.

And this response was noted within 70 seconds of the needle piercing through the fetal abdominal wall.

Q. Doctor, was there any anesthesia used in either of these studies?

A. Initial studies were done without any anesthetic being administered to the fetus. These studies were performed under ultrasound guidance. And one of the later studies published, I believe in October 2001, decided to test the hypothesis that: Is this a specific pain response?

So what they did was they—for fetuses that were having repeated transfusions they randomized them to either receive fentanyl, which a pain relieving drug—spelled F-E-N-T-A-N-Y-L—a pain relieving drug was given at the beginning of the transfusion, and then the transfusion was given, and then the hormonal response was measured. As opposed to the same fetus receiving the blood transfusion without the fentanyl.

And what they found was giving the anesthetic drug blocked the hormonal and the circulatory response to the [1589] painful stimulation during blood transfusion.

Q. Doctor, are there any other factors besides pain that can cause these stress responses?

A. That is a good question. The stress response is primarily not specific, so that other things, for example, if the mother gets a fever and the fetus has a fever, that will also lead to a stress response.

But the fact that these responses are sequentially and temporally related to painful stimulation, really substantiates the fact that these are in response to a painful stimulus.

Also these researchers have been very careful about studying the control situation as well. For example, they will measure the hormonal levels at baseline, and then they will measure the hormonal level after the painful stimulus has occurred.

And in some fetuses they will use the painful method through the intrahepatic vein versus a non-painful method, through the umbilical cord.

So good controls help us judge that these are responses specific to the painful stimulation.

Q. But, Doctor, would you say that these physiological responses are direct evidence of pain in the fetus?

A. It depends on what you want to classify as "direct." Essentially, the fetus cannot talk. And if the fetus can't [1590] talk to us, then we need to find other surrogate markers for the response of the fetus. And we're simply limited to the changes in physiology or changes in behavior that would result following painful stimulation.

Q. Would you characterize these responses as an inference?

A. Yes, to a great extent. The pattern of these responses is very similar to the pattern of physiological responses that are generated in older children or adults.

And older children and adults are able to tell us that they have perceived pain. So we look at the pattern of responses, even though there are huge physiological differences between a child and a fetus, however, the pattern of the response appears to be very similar. And the child does report that this is painful.

So, we can infer from these studies that these may be reaction to the pain that the fetus was experiencing.

MS. NORONHA: Your Honor, I understand that you break at 10:00 o'clock. Would you like to do it now?

THE COURT: Is this a good place for you?

MS. NORONHA: Yes.

THE COURT: All right. We will break for 15 minutes.

THE WITNESS: Thank you, Your Honor.

(Recess taken at 10:00 a.m.)

(Proceedings resumed at 10:18 a.m.)

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[1593]

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Q. And, doctor, aren't there differences between premature neonates and fetuses that would affect your ability to extrapolate from one to the other?

A. There are certainly differences, physiological differences, between a fetus and premature neonate, even at the same gestation.

The fetus does not require the ability to get oxygen and nutrition and so on. All these are supplied to the fetus through the umbilical cord from the maternal side. Whereas, a premature infant has to resort to its own physiology in order to maintain oxygenation through the lungs and the heart or has to deal with alternate periods of feeding and fasting, which is not the case during the fetal life. There is a continuous supply of nutrition through the placenta.

So there are major physiological differences between fetuses and premature infants.

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[1606]

I believe at that time a surgical incision is placed and a trocar is inserted to puncture through the occipital bone and the membranes covering the brain,

and then suction is applied to simply remove the intracranial contents. And then the fetal head is delivered through the cervix.

That's my somewhat rudimentary understanding of this procedure.

Q. Doctor, do you have an opinion as to whether this procedure would cause pain to the fetus at or beyond 20 weeks' gestation?

A. Yes. If performed on fetuses beyond 20 weeks of gestation, this procedure has a very high probability of causing prolonged and excruciating pain to the fetus.

Q. What do you mean by "prolonged and excruciating pain"?

A. I believe that the grasping of the lower extremity of the fetus, the manipulation of the fetus and its —the delivery of the fetal body through an incompletely dilated cervix would be traumatic and painful to the fetus.

That the surgical incision placed would cause acute pain, because of the tissue injury involved. That the puncture through the occipital bone, through the membranes of the brain, both of which are very richly innervated with sensory fibers would cause excruciating pain.

Up to the point that the fetal brain is suctioned out and fetal demise occurs, there would be pain experienced by the fetus.

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[1614]

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Q. On direct, Dr. Anand, you testified that you believe a fetus experiences pain at 20 weeks' gestation; is that correct?

A. That is correct.

Q. And you are measuring 20 weeks as 20 weeks after conception; is that correct?

A. That's correct.

Q. That would be approximately two weeks later than 20 weeks LMP?

A. That is correct. Pregnancy begins at conception, I believe.

Q. So it is either 20 weeks after conception or 22 weeks LMP?

A. That is correct.

[1615]

Q. Now, I believe your testimony was that there were converging lines of evidence that suggests that consciousness in the fetus occurs at about 20 to 22 weeks; is that right?

A. That is correct.

Q. But you do not hold the view to a reasonable degree of certainty that fetuses before 20 weeks experience pain?

A. That is correct.

Q. In fact, you are not at all certain that a fetus can experience pain between 16 and 20 weeks?

A. That is correct.

Q. At your deposition you said there is only a 50 percent probability that a fetus can feel pain between 16 and 20 weeks?

A. Exactly. The likelihood of feeling pain or not feeling pain is about the same. There is—so, at this point I am not able to say either way does the fetus feel pain or does not feel pain between 16 and 20 weeks, like you said.

Q. It is no different than we flipped a coin, 50 percent heads/50 percent tails?

A. You're right. Absolutely.

Q. And, indeed, your opinion with respect to the fetus between 16 and 20 weeks is based on a new view of pain?

A. That is ~~correct.~~ —

Q. A very novel, new view?

A. Absolutely right.

Q. In fact, no one has done a study of that new view as it [1616] relates to fetuses?

A. That is correct.

Q. And no one has ever done a study of the new view of pain as it relates to pre-term neonates?

A. You're absolutely right. This is a very novel view of pain that was published as recently as June of 2003. And currently, there are no studies that have been published based on this new view of pain.

Q. And is there no firm scientific evidence that pain can be experienced by a fetus as early as 16 weeks?

A. No, there is not.

Q. Or, indeed, before 20 weeks?

A. No, there is not. I agree that there is some data showing physiological responses, meaning release of hormones or changes in circulation before 20 weeks, but I am very skeptical about the reproducibility of that data and feel that it cannot—it cannot be relied upon as well or as much as we can rely on data after 20 weeks of gestation.

Q. And that is why the majority of scientists agree that there's no—that pain cannot be experienced before 20 weeks?

A. I agree with that, yes.

Q. And so it would not be a medical fact that a fetus would experience pain before 20 weeks?

A. That is correct.

Q. Now, Dr. Anand, on direct you offered an opinion that a [1617] fetus would be subjected to pain from the abortion procedures banned by the partial-birth abortion ban act of 2003; is that right?

A. That is correct, if the fetus is beyond 20 weeks of gestation.

Q. Okay. So your opinion does not go beyond the 20 week period?

A. That is correct.

Q. So if there are procedures that are banned by the act before—that occur before 20 weeks, your opinion does not apply to those procedures?

A. Absolutely right.

THE COURT: Let me make sure I understand. When you use 20 weeks, we are talking about 22 weeks LMP?

MS. PARKER: That's correct. That's what he—

BY MS. PARKER:

Q. That is what you testified. You are talking about 22 weeks LMP?

A. I testified that it's 20 weeks of gestation or 20 weeks postconception—

THE COURT: All right. But you have—

THE WITNESS: —So it is—

THE COURT: Throughout this entire trial we have been using LMP. I want to make sure that I understand your testimony to be after conception. LMP would be an older—

[1618]

THE WITNESS: That's correct, Your Honor. Yes.

BY MS. PARKER:

Q. And by that your opinion starts at 22 weeks LMP; is that right?

A. Yes. If you postulate, which I haven't testified to, if you postulate, there is two weeks between LMP and conception. And that can be variable to some extent, but LMP is the accepted way in obstetric clinical practice of measuring the length of pregnancy, whereas in scientific studies involving fetuses or in the measurement of neonatal maturity of premature neonates, usually postconception is the usual way this is measured.

Q. Now, I would like to focus on your opinion that fetal pain can be experienced at 20 weeks LMP. It is

true, is it not, that there are no studies of fetal pain during an abortion procedure?

A. You're right. There are no studies that I know of that have looked at the question of fetal pain during an abortion procedure.

Q. And you're aware of no articles that are focused on that issue, either; isn't that right?

A. That is right.

Q. And, in fact, none of the studies you are relying on directly establish fetal pain at 22 weeks LMP?

A. That's right.

[1619]

Q. Your opinions are based instead—I think you said this on direct—on extrapolations from studies on premature babies?

A. Yes.

Q. And extrapolations from animal models?

A. Yes, as well as the responses of fetuses undergoing painful procedures in utero.

Q. And your opinion is also based on inferences?

A. That's correct.

Q. In fact, your entire opinion is based on inferences?

A. That is correct. All scientific conclusions are, for the most part, based on inferences.

Q. So as a result, it is not your opinion that a fetus at 22 weeks LMP will definitely experience pain?

A. It depends on how you define "definitely." It depends on what level of certainty that you consider as labeling definitely evidence.

Q. Well, in fact, at your deposition I think you used 80 percent was the number that you threw out?

A. Yes. In my deposition I had said that there is an 80 percent or greater probability that a fetus will experience pain during the D&X procedure after 20 weeks of gestation.

And that is simply to retain some level of scientific skepticism. I am prepared to discard my hypothesis if evidence shows to the contrary that a fetus does not feel pain after 20 weeks of gestation.

[1620]

Q. But that evidence does not—has not yes been tested.

There has been no definitive studies on that as of now; isn't that right?

A. You see, that's what I meant earlier. It depends on how you would—what you would take as definitive evidence. Pain or experience, for that matter, any experience cannot be measured directly except when it is reported by the individual undergoing the experience.

And so if you tell me what you consider as definitive evidence, then I'll bring out that evidence if it is available in the literature, or I will design a study to show you how that definitive evidence could be obtained.

Q. But studies looking at that directly today do not exist; isn't that right?

A. Certainly definitive evidence by direct measurement of fetal experience is not possible.

Q. Right. It is your opinion, is it not, that it is not possible to directly measure whether a fetus experiences pain?

A. That is right.

Q. No—

A. And that is why—that is why we depend on surrogate markers of pain and the multiple lines of evidence, the anatomical and physiological and functional and behavioral aspects of pain.

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[1622]

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Q. And it is true, is it not, that it's technologically impossible at this time to measure emotions of the fetus?

A. You're right. It is impossible to measure emotions in the fetus, although we are able to study the emotional responses of the fetus in the terms of facial expressions, eye blinking, or even the crying activity from movements of the diaphragm, using ultrasound behavior studies.

Q. Dr. Anand, if you could turn to page 128 of your deposition.

A. Yes, I have it.

Q. And it is true, is it not, I asked you at your deposition:

> "But you're saying you cannot evaluate the Emotional experience of pain by a fetus?"

And you responded:

> "At this time, I think it is technologically difficult to evaluate the emotional experience of the fetus. There are emotional experiences the fetus manifests that have been evaluated through studies in later pregnancy, so we do know that emotion does exist during fetal life."

And it is also your opinion we are just not smart enough to evaluate the emotional experience?

A. Yes. That is what is stated in the continuation of that [1623] statement.

Q. Right. Now, you also agree, I believe you stated on direct, with the IASP statement that pain is always subjective.

A. Yes, it is.

Q. By "subjective," you mean, it is meaning and interpretation by the individual who is experiencing it?

A. That is correct.

Q. And subjectivity cannot be studied in fetuses; isn't that correct?

A. That is correct, or at any other age.

Q. It cannot be studied because we cannot communicate with fetuses?

A. That is correct.

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[illegible6]

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Q. Okay. You would also agree that it is necessary for a fetus to have some level of consciousness in order to experience pain; isn't that right?

A. That is correct.

Q. And that is because you cannot experience pain without consciousness?

A. That is correct.

Q. And consciousness is not something that even can be [1627] measured in adults; isn't that right?

A. That is correct.

Q. And there are no studies examining consciousness of the fetus; is that right?

A. That is right.

Q. Those studies simply can't be done?

A. You're absolutely right.

Q. And you would agree, would you not, that there is no consensus in the medical community that consciousness begins even at 20 weeks for fetuses?

A. It depends on how you would define—in the general medical community, no, there is no consensus. But say, for example, people in our maternal fetal network who are very focused on the development during fetal life there would be consensus that consciousness is expressed very soon after 20 weeks of gestation.

Q. Well, didn't you rely in putting together your expert report on some articles that express the view there was no consensus that consciousness begins at 20 weeks?

A. Yes. Certainly I had included those in my expert report in—for due diligence, to show that there are contrary opinions to the one that I am stating.

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[1629]

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Q. If you could look at page 67, the right-hand column, the last sentence in the second paragraph, under the heading:

> "Consciousness in the fetus." Do you see that?

A. Yes.

Q. And there it says:

> "It may be impossible to obtain unequivocal Evidence for fetal consciousness"?

A. That is correct.

Q. And you're also familiar—I believe you discussed this on your direct—with a Royal College of Obstetrics and Gynecology in the United kingdom?

A. Yes.

Q. That organization had established a working group to review all of the material available at that time regarding fetal consciousness; isn't that right?

A. That is correct.

Q. And that group concluded that fetal consciousness did not occur before 26 weeks; isn't that right?

A. That is correct.

Q. So, the entire notion of fetal consciousness is fairly controversial; isn't that right?

[1630]

A. You are absolutely right.

Q. That is because there is no definitive evidence of it and when it begins?

A. Yes, that's correct.

Q. In your deposition you agreed with me it is all sort of supposition or speculation; isn't that right?

A. Where are you referring to in my deposition?

Q. If you can look at page 163, line 16 and 17. Actually, if you look starting at line 1, I asked:

> "Is it also controversial amongst the group of people who believe that there is fetal consciousness as to when that consciousness begins?"

And you answered:

> "True."

And later on I said:

> "There is no definitive evidence of it."

You answered:

> "Exactly."

I said:

> "So it is all sort of supposition or speculation?"

And you responded:

> "Exactly."

A. Yes, that is part of my answer.

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[1633]

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Q. But there are physiological differences between pre-term neonates and fetuses?

A. I agree with you.

Q. And there are also radical differences in terms of their environmental experiences; isn't that right?

A. That is correct.

Q. And the studies you cited during your direct testimony about the ability of fetuses to acquire verbal memories, all of those were performed in the third-trimester; isn't that right?

A. They were mostly from the third-trimester. There were some studies from the second-trimester, as well.

Q. But none of those studies included fetuses at 20 weeks; isn't that right?

A. That is right.

Q. And to the extent that you express an opinion that there is consciousness in a fetus that would be a rudimentary form of consciousness?

A. That is correct. Consciousness, the prevalent notion in the medical community is that consciousness is not an all-or-none phenomenon. It is not like an on/off switch: on one minute and off the next, or vice versa. It is more like a [1634] dimmer switch.

It is more like the expression of consciousness is gradual. If I could use a common experience that we all have, when we awaken from a deep, dreamless state of sleep, there are intermediate levels of consciousness:

deep drowsiness, and then drowsiness, and then light drowsiness, and then awakefulness, and so on.

It is thought that consciousness appears in the fetus in a very similar manner that there are—after the development of the cortex is completed, there are increasing levels of consciousness very gradually. It is like the night meets the day. Very gradually there is the dawn of consciousness during fetal life.

Q. But it is your opinion, is it not, that to the extent a fetus has consciousness at 20 weeks it is rudimentary?

A. True. That is correct.

Q. Now, Dr. Anand, you also agree there is a difference in the medical—opinion in the medical community about the ability of a fetus to experience pain?

A. Yes, there are differences of opinion within the medical community.

Q. Even for those who feel or believe that a fetus could experience pain, there is disagreement as to when that they would first begin to experience pain?

A. That is correct.

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[1641]

Q. But, Dr. Anand, it is correct, is not it not, that you cited a whole number of articles with your expert report, many of which conclude that the anatomical structures are not in place until 26 weeks?

A. Yes, Ms. Parker, I mentioned that—

Q. And that—

A. —I felt that due diligence was required in order to show both sides of the controversy.

Q. And so that would indicate that there is a fair bit of controversy within the medical community as to when fetal pain could begin to exist?

A. I agree with you.

Q. Now, because there is no definitive evidence of pain, you use surrogate markers. I think that is your term?

A. Yes.

Q. And those surrogate markers indicate pain is based on studies on children and adults, in part.

A. In part, in children and adults, and also from premature infants. And there are some direct studies from the fetus, as well.

Q. I believe we talked about the differences between pre-term infants and fetuses. But you would also agree, would you not, that there are huge physiological differences between fetuses and adults?

A. Certainly there are differences in their physiology, but [1642] the patterns of response to pain are considered cross-development.

Q. But the physiological differences would impact the ability to extrapolate from studies on adults to fetuses; isn't that right?

A. Certainly.

Q. And there are also physiological differences between fetuses and children?

A. Yes, there are.

Q. And those physiological differences would also impact on your ability to extrapolate from studies on children to fetuses; isn't that right?

A. To some extent, yes, although not completely.

Q. And one of your surrogate markers is that the anatomical structures required for pain are in place at 22 weeks LMP?

A. That is correct.

Q. And you base that on an analysis of normal, healthy fetuses?

A. That is correct.

Q. But those same conclusions—and I believe you've stated this on your direct testimony—do not hold true for fetuses with various fetal anomalies?

A. If those anomalies involve the brain, spinal cord or sensory nerves, yes, they would not hold true for fetuses with anomalies.

[1643]

Q. You do not extend your opinion with fetuses with certain chromosomal abnormalities?

A. Yes, if those chromosomal abnormalities include anomalies of the spinal nervous system or the peripheral nervous system, yes.

Q. Your opinion does not apply to them?

A. That is true.

Q. Your opinion does not apply to fetuses that have abnormalities in brain structure?

A. That is correct.

Q. So, for example, you do not extend your conclusions to a fetus with hydrocephaly?

A. That is correct.

Q. Or trisomy 18?

A. That is correct.

Q. Or trisomy 13?

A. That's correct. These are all lethal abnormalities of a chromosomal nature.

Q. Your opinion does not apply to them?

A. True.

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[1651]

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Q. And if you look at page 145 in the last paragraph?

A. Yes.

Q. That article concludes, does it not, that:

> "Indirect methods of assessing pain like motor movement patterns, pulse rate and blood pressure are still being developed and none is yet suitable for assessing pain in fetuses."

Isn't that right?

A. That is correct on page 146, the first paragraph.

Q. And, finally, you relied on an article by Fisk, which is Learned Treatise A-16.

MS. PARKER: May I approach the witness, Your Honor?

THE COURT: Yes.

BY MS. PARKER:

Q. That's an article titled "Effect of Direct Fetal Opioid Analgesia on Fetal Hormonal and Hemodynamic

Stress Response to Intrauterine Needling" that appeared 2001 in a journal called Anesthesiology?

A. Yes, I have it.

Q. I believe you stated on direct that Dr. Fisk was one of the leading researchers in the area of fetal response to hormonal stress; isn't that right?

A. Certainly.

Q. There, the authors in the article conclude it is not known [1652] whether the human fetus experiences pain; isn't that right?

A. Where are you reading?

Q. If you can turn to page 14 of 17, in the third paragraph, and the first sentence states:

> "Although the human fetus in the last half of gestation has the necessary neuroconnections for nociception, it is not known whether the human fetus experiences pain."

Do you see that?

A. Yes. That is correct.

Q. They also concluded, do they not, and I am looking at the final sentence of the third paragraph on page 14:

> "Because the relation between stress responses and pain is not clear, it is not possible from our data to conclude that the human fetus experiences pain in utero."

Do you see that?

A. Yes, I do.

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[1656]

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Q. If you could look at section 4.1, the third and fourth sentences state:

> "Much public concern has arisen because of the possibility that a fetus may feel pain; such a possibility is founded on the existence of reflex movements and neural activity produced by sensory stimulation. Despite the usefulness of such reflexes in understanding spinal cord and brain stem pain processing, it would be a mistake to equate them with true pain experience which must involve the cortex and develop postnatally along with memory, anxiety, and other cognitive brain functions."

Do you see that?

A. Yes, I do. That is part of this report.

Q. And the MRC report also concludes that fetal pain is still poorly understood; isn't that right?

A. That is right.

Q. And if I could direct your attention to page 11, or section 9, conclusions. And there it states:

> "The basic molecular and cellular mechanisms of fetal and neonatal pain are still poorly understood as are the effects of anesthetics or analgesics." Correct?

[1657]

A. That is correct.

Q. Yes?

A. Yes. This report was published in August of 2001 and appeared before the paper by Nicholas Fisk and published actually a few months later.

Q. So, let's talk briefly about the effect of maternal anesthesia on the fetus, because I believe one of the opinions you gave concerned the effect of maternal anesthesia on the fetus; is that right?

A. That is correct.

Q. And I believe you stated earlier that you personally have not conducted any studies measuring the effects of anesthesia on fetuses?

A. Yes. My opinion is that it would be unethical to perform such studies because of the toxicity that the mother would be exposed to. So, no IRB committee would approve such research protocols.

Q. You have not personally done any obstetric administration of anesthetics either; isn't that right?

A. I have not. That's right.

Q. And it's correct, isn't it, that the effect of maternal anesthesia on the second-trimester fetuses is a relatively underinvestigated area?

A. That is correct.

Q. In fact, it is completely unexplored; isn't that right?

[1658]

A. To a great extent, yes, it is.

Q. There's simply no information of the delivery and efficacy of anesthesia to fetuses during the second-trimester that's currently available?

A. I wouldn't say that there is no information. There are studies that have looked at the medical termination of pregnancy using prostaglandins that have measured blood levels of anesthetics in the mother and the fetus, and there are some of those studies were performed in the second-trimester.

But the amount of data that is available is extremely sparse, extremely limited as compared to what is available in the third trimester or the first trimester.

Q. Dr. Anand, could you turn to page 179 of your deposition?

A. I have it.

Q. At lines 13 to 17, isn't it true that I asked you:

> "So, to date, there has been virtually no research addressing the sort of delivery and efficacy of anesthesia to fetuses during the second trimester?"

And you responded:

> "Yes, there is unfortunately no information on that."

A. That is correct. Although, since then, I am a little better informed about the information on—in this area. Also elsewhere I had stated that this is relatively * * *.

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[1660]

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Q. Now, in forming your opinions about the effects of anesthesia, you assume that methods of local anes-

thesia would be routinely applied for intact D&E procedures?

A. Yes. That is what I have learned from reading the literature, particularly the work published by David Grimes and others in this field.

Q. But you have never yourself performed an intact D&E?

A. Certainly not.

Q. Or observed one?

A. Certainly not.

Q. So you don't really have any basis for knowing what methods of anesthesia are routinely applied in intact D&E procedures?

A. That is correct. I don't claim to be an expert in this area.

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[1666]

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Q. So, the opinions you've given about fetal pain focus on the intact D&E procedures that are banned by the act; is that right?

A. That is right.

Q. And you would agree, would you not, that to the extent of the fetus has the ability to experience pain during an abortion procedure, that intact D&E procedure would not be the only abortion procedure that might cause pain?

A. That is correct.

Q. You are familiar, are you not, with a method of abortion called induction?

A. To some extent. My understanding is rudimentary given the lack of expertise in that area.

Q. But it is your opinion, is it not, that a fetus may [1667] experience pain during an induction abortion procedure?

A. I mentioned earlier that if there is separation of the placenta and fetal demise occurs prior to extraction of the fetus, then there will be no experience of pain.

On the other hand, if the fetal demise does not occur, there would be the extraction of the fetus through an incompletely dilated cervix would be associated with pain to the fetus.

Q. And it's also your opinion, is it not, that a fetus would experience acute pain in reaction to needling for the purpose of injecting either digoxin or potassium chloride?

A. Yes, that is correct.

Q. And that the injection of digoxin or potassium chloride into the fetal body will certainly cause pain to the fetus?

A. Yes. From the point of entry of the needle into the fetal body to the point when fetal demise occurs as a result of cardiac arrest, there would be a brief period of acute pain.

Q. And it's also your opinion, is it not, that a fetus undergoing dismemberment during the abortion procedure that is known as the disarticulation D&E would also experience pain if it was more than 20 weeks out gestation?

A. Yes, that is correct.

Q. Indeed, severe pain?

A. Yes, depending on the degree of somatic injury that is involved, there is the likelihood of severe pain.

[1668]

Q. In fact, it's your opinion that a fetus undergoing a dismemberment procedure would experience greater pain than if the fetus were removed intact during an intact D&E procedure?

A. Up until the point that fetal demise occurs, yes, dismemberment will be associated with severe pain and may well be greater than what occurs during the intact D&E or the D&X procedure.

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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEBRASKA

No. 4:03CV3385

LEROY CARHART, MD, WILLIAM G. FITZHUGH, MD, WILLIAM H. KNORR, MD, AND JILL L. VIBHAKAR, MD,
PLAINTIFFS

v.

JOHN ASHCROFT, IN HIS OFFICIAL CAPACITY AS ATTORNEY GENERAL OF THE UNITED STATES,
DEFENDANT

DEPOSITION OF
JOANNA M. CAIN, M.D.
Feb. 10, 2004

REDACTED

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* * * * *

[COPPOLINO EXAMINES CAIN]

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[7] Joanna M. Cain was called as a witness and, having first been duly sworn, was examined and testified as follows:

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[13]

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Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

* * * * *

[14]

* * * * *

Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

* * * * *

[22]

* * * * *

Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

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[25]

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Q. [REDACTED]

A. [REDACTED]

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[67]

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Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

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[160]

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Q. Okay. That topic terminology, what was discussed with respect to the issue of terminology?

A. As I indicated, in the materials the partial-birth abortion terminology was not considered a part of the medical lexicon. There was no clear definition of the term "partial birth abortion." One of the goals of the task force was to identify a specific definition that did not encompass other obstetrical procedures. Another goal was to identify an appropriate name for the procedure.

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[164]

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Q. My question is really, Exhibit 3 describes a definition of intact D&X that ACOG developed as containing all of the following four elements, and it lists those elements, "deliberate dilation of the cervix, usually over a sequence of days; instrumental conversion of the fetus to a footling breech; breech extraction of the body excepting the head; and partial evacuation of the intracranial contents of a living fetus to effect vaginal delivery of a dead but otherwise intact fetus."

And the statement says "Because these elements are a part of established obstetric techniques, it must be emphasized that unless all four elements are present in sequence, the procedure is not an intact D&X."

[165]

Now, first question, did the task force come up with this formulation that I've just read?

A. Yes.

Q. And did the task force conclude that it was necessary that all four elements must be present in sequence, or the procedure is not an intact D&X?

A. Yes.

Q. Why would—I may be misunderstanding it, so I just want to ask you this question so I understand what the task force has done here. Why would a procedure not be an intact D&X if the fetus was already in a breech position?

A. The committee at that time was concerned that a procedure was being described that included instru-

mental conversion of the fetus to a footling breech and, because that was a significant part of the description, felt that it should be included in that way.

Q. If all of the other elements were present except the fetus was not converted to a footling breech by means of instrumentation, would you say that the procedure preformed was not an intact D&X?

[166]

A. By the description of this statement, then yes, it would not be an intact D&X.

* * * * *

[174]

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Q. Did the task force find that the intact D&X procedure was, in fact, performed in the second trimester?

A. The task force focused on previability abortion, primarily in the second trimester.

Q. Did the task force find that the intact [175] D&X procedure was performed in the second trimester?

A. That is correct.

Q. Dr.—

A. Primarily in the second trimester.

* * * * *

[177]

Q. And the task force understood, did it not, that this procedure was performed beginning at 18 weeks, the intact D&X procedure?

A. That it could be preformed starting at 16 weeks.

Q. Did it have an understanding that it was being performed starting at 18 weeks?

A. The task force understood that intact D&X was one method of performing an abortion after 16 weeks.

Q. What did the task force discuss with respect to safety?

A. Numerous examples were raised by the members of the task force regarding different procedures in specific cases and issues of safety.

For example, in GYN-oncology, the most pertinent example would be triploidy, which is a form of cancer of the placenta often diagnosed in the second trimester with severe preeclampsia. In that case, that least amount of instrumentation possible of the uterine wall is desirable. So it is much safer for the woman to have an intact D&X to remove the molar pregnancy. So multiple examples were used to explore issues of safety at the time and in [178] comparison to other procedures.

* * * * *

Q. Okay. And you mentioned the CDC data. What was it about the CDC data which informed the task force's view with respect to the safety of [179] intact D&X?

A. The overall safety in the second trimester.

Q. Of D&E?

A. D&E, because D&X was not separately coded.

* * * * *

[190]

Was that the conclusion of the select panel?

A. That it was the only option?

Q. Well, if you want to look at Exhibit 7—I'll go a little above that. "Terminating a pregnancy is indicated in some circumstances to save the life or preserve the health of the mother." This was, obviously, a conclusion of the select panel; is that correct?

A. That is correct, and we could identify numerous circumstances in which this might be the best procedure for that, rare but still numerous.

Q. Where does it say in this statement that this would be the best procedure to do that? Would you agree with me it doesn't say in this statement that it might be the best procedure in some circumstances?

A. Right. Dr. Frigoletto and I discussed that, actually, on Saturday, because the amended final statement, which includes the executive committee statement, does include a sentence between the sentence you read and notwithstanding this [191] conclusion, "ACOG strongly believes that decisions about medical treatment must be made by the doctor in consultation with the patient." And both of us agreed that it was clearly the sense of the committee. We just thought it spoke for itself and that we were glad that the executive board had put that phrase in.

Q. I want to ask you about that in a second, but I just want to confirm that the sentence that "a select panel could identify no circumstances under which this procedure would be the only option to save the life or preserve the health of the woman," was that the conclusion of the select panel as reflected in this document?

A. Correct.

Q. Now let's talk about the added sentence. This is in the final statement, and you can look at Exhibit 3, if you'd like to have it in front of you.

A. I have 4.

Q. It's the same thing. The final statement approved by the board, a sentence is added, "an intact D&X, however, may be the best or most [192] appropriate procedure in a particular circumstance to save the life or preserve the health of a woman." And to complete the sentence, "and only the doctor, in consultation with the patient, based upon the woman's particular circumstances can make this decision."

Who added that sentence?

A. The executive board edited the sentence.

Q. Were you a part of the deliberations in adding that?

A. No, I was not.

Q. Was this additional sentence presented to the task force for its consideration?

A. No, although it was very much in the sense of a discussion of the task force.

Q. Do you have any knowledge of the deliberations that resulted in the addition of this sentence?

A. I have information from Dr. Frigoletto about his recollections and also from Dr. Hale.

Q. And was it Dr. Frigoletto that proposed adding the sentence?

[193]

A. I don't believe that Dr. Frigoletto—I know that Dr. Frigoletto could not remember who proposed the sentence.

Q. Have you—other than Dr. Frigoletto—you said you discussed how this sentence came to be added with Dr. Frigoletto?

A. That's correct.

Q. And did you discuss it with Dr. Hale?

A. Not specifically with Dr. Hale, but I'm aware of his memory.

Q. Was there any debate at the task force over this sentence?

A. I don't remember this sentence coming up.

Q. Was anyone—do you know if anyone in particular was an advocate for adding this sentence?

A. I don't remember this sentence coming up at the task force meeting.

Q. Do you know if he was an advocate at the board for adding this sentence?

A. I don't know.

Q. Do you know if Dr. Hale was an advocate at the board for adding this sentence?

[195]

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Q. Are you aware of any analysis or study—let's strike that and say, are you aware of any study which supports the conclusion that intact D&X may be the

best or most appropriate procedure in certain circumstances?

A. I'm not aware of a study. I am well aware of multiple circumstances that an expert panel could identify at the time of the task force where it was clearly the best choice, including in my field, where the other options led to a higher likelihood of death or recurrence of disease.

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[199]

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Q. **[REDACTED]**

A. **[REDACTED]**

* * * * *

[200]

* * * * *

Q. **[REDACTED]**

A. **[REDACTED]**

Q. **[REDACTED]**

A. **[REDACTED]**

[REDACTED]

Q. **[REDACTED]** [201] **[REDACTED]**

A. **[REDACTED]**

* * * * *

Q. **[REDACTED]**

A. **[REDACTED]**

* * * * *

[205]

* * * * *

Q. [REDACTED]

A. [REDACTED]

Q. [REDACTED]

A. [REDACTED]

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[208]

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Q. Did he ever say—did you ever hear him say that—when he was asked—when asked why the statement said the procedure may be the best in some cases, do you know it to be Dr. Frigoletto's views that it may not be?

A. I think that was the view of all of us if it's interpreted in the sense that it is an individual decision for an individual patient with the circumstances of her disease process, her needs, and her risks, so that any procedure that may be appropriate for a diagnosis may be appropriate for some and not for others, even though the data on safety is the same between two procedures. Medicine is a highly individualized practice.

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[232]

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Q. Okay. And what are some aspects of the D&X procedure that might lead a physician to conclude that a D&X is the best or most appropriate abortion procedure to save the life or preserve the health of a woman?

A. One of the elements that came up among the different and numerous examples was the decreased instrumentation and the ability to preserve a relatively intact fetus for evaluation, particularly for some genetic based congenital anomalies.

Q. And why would less instrumentation be beneficial?

A. It depends on the circumstance. In the circumstance of septic abortions, any increase in instrumentation might increase the ability of bacteria to enter the blood stream.

In the case of tropoblastic disease, increased instrumentation is likely to transport tropoblastic disease, which is a form of cancer to [233] other areas such as the lung.

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[234]

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Q. If I represent to you that Congress claims that an ethical consensus exists that the practice of partial-birth abortion "is a gruesome and inhumane procedure that should be prohibited," as a member of the ACOG task force on partial-birth abortion, do you believe there's such an ethical consensus?

A. No.

* * * * *

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

No. C 03-4872 PJH

PLANNED PARENTHOOD FEDERATION OF AMERICA, INC., AND PLANNED PARENTHOOD GOLDEN GATE, PLAINTIFFS

v.

JOHN ASHCROFT, ATTORNEY GENERAL OF THE UNITED STATES, IN HIS OFFICIAL CAPACITY, DEFENDANT

DEPOSITION OF
STEVEN L. CLARK, M.D.
Feb. 12, 2004

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[PARKER EXAMINES CLARK]

[12]

A. Yes, but not elective abortion.

Q. Was that by choice or was that part of the required curriculum?

A. It was—well, that's—I guess that's two questions.

Q. Sorry.

A. There was an option that one could have trained in performance of elective abortions. It was not a required part of the curriculum. And it was my choice that I opted for additional obstetrics training as opposed to that elective.

Q. So, you opted not to train in elective abortions even though it was offered at USC?

A. That's true.

Q. And did you—what form of training in abortions, then, did you take?

A. Well, there would be—I can think of three categories. One would be first trimester pregnancy losses, where the embryo had died or the mother was having a lot of bleeding. And I did literally hundreds—literally hundreds of those.

There then would have been a second category of older, second trimester fetuses where the fetus had died. And then there would be another category of both first and second trimester fetuses where there were * * *.

* * * * *

[14] Perinatal Center, which was a large referral center for Central and Southern Utah. Since 1990, I have been on the faculty of the University of Utah as a full professor of obstetrics and gynecology.

Let me also add one thing that I may have missed, and that is the final year of my fellowship I also held a position as assistant professor at USC.

So I've been—that's been my position since that time. And I've held some administrative positions up until—excuse me, up until about the year 2000 at Intermountain Health Care, which is a private teaching facility of the University of Utah School of Medicine.

Q. So when you joined the University of Utah Medical School in 1990, you joined as a full professor?

A. Yes.

Q. You had not served as an associate or any other form of professor before you joined as a full professor?

A. Oh, I'd been assistant professor at USC.

Q. But that was just for one year?

A. Yes.

Q. Is that normal, to attain full professorship after one year as an assistant professor?

A. I think it's not normal in general, but when you've got, as I think I did—you can look at the CV * * *.

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[16]

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Q. Okay. So your current position is a full professor at the University of Utah—

A. Yes.

Q. —is that correct? And what are your responsibilities in that position?

A. 50 percent of my time, plus a share of night call, involves direct hands-on patient care. And this would be virtually exclusively women with serious problems or potentially serious problems who are referred by another obstetrician for care.

Most of the remainder of that time is spent teaching, either in terms of formal didactic lecturing or what you might call clinical teaching, rounding with medical students, fellows and residents or allowing them to assist in the care of women with various [17] pregnancy-related problems.

Q. Do you currently provide abortions as part of the 50 percent of the time you do with patient care?

A. Sure.

Q. Up to what week?

A. Well, it's—there's no line. That is to say, when —if at any point we determine that the mother's life or health is at significant risk, starting at conception and ending at full term, and if the mother then chooses to end that pregnancy, we end it.

And that may be done by cesarean section at full term or it may be done by suction curettage in the first trimester by D&E. In the second trimester—by medical induction anytime in the second or third trimester.

So I don't really draw a distinction in that sense, because I'm not doing elective procedures. But if a pregnancy needs to be ended for the mother's health, then it is ended.

Q. Do you teach abortion procedures in your capacity as a professor?

A. Yes, but not—these health issues, in fact, are quite rare in American medicine. But certainly those situations in which they are necessary, I both lecture and teach the indications for them and then [18] would either do or assist the resident in doing, if you want to call abortion anything prior to viability, the abortion. Or if you want—or delivery beyond that time.

Q. Okay. So do you actually teach the methods of abortion? You indicated you taught indications. Do you also teach methods?

A. Sure. But what I'm trying to tell you is that's not a major—I mean, you have to teach residents when they're doing the procedure, but it's not as if I have formal—we do that as the cases arise only.

Q. So, you've just teaching it almost in observation or by example—

A. On the job.

Q. On the job. You've not doing any formal teaching of methods of abortion or techniques for abortions?

A. I don't lecture on techniques of abortion. Let's put it that way. But I teach, as I am performing such procedures in those unusual cases when they've necessary medically or for serious anomalies.

Q. Do you supervise others who perform elective abortions?

A. No.

[19]

Q. Are elective abortions done at the University of Utah?

A. No.

Q. Were elective abortions done at the University of Utah Regional Perinatal Center?

* * * * *

Q. Your resume indicates you were the chairman of the quality assurance committee here at—or the Department of OB/GYN at LDS Hospital.

A. Yes.

Q. How long have you held that position?

A. Well, I think since 1990.

Q. And what does that position entail?

A. There are certain fall-out criteria for bad outcomes for mother or babies which require a chart to be reviewed. And then I chair a committee which reviews those records and determines whether the care given was appropriate or inappropriate and then recommends appropriate training or disciplinary steps, if the care was deemed to be inappropriate.

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[21]

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Q. Have you written any articles about abortion [22] procedures—

A. No.

Q. —or abortion techniques?

A. No.

* * * * *

Q. But you have no recollection of having conducted peer review on any articles involving abortion procedures or techniques?

A. That's true.

Q. Have you participated or conducted any studies of any method of abortion?

A. No.

* * * * *

[35] abortion?

A. Not that I can remember.

* * * * *

Q. So, what is the earliest period of time when you would think about doing a labor induction for the purposes of an abortion?

A. Well, I would currently probably not recommend it prior to 18. That is, the induction is usually much more difficult prior to that. And D&E would be—in most cases would be preferable, I think.

Q. You indicated a few moments ago that you have not done that many labor inductions for purposes of an abortion; is that right?

A. Yes, it is.

Q. Can you quantify that it any way? Are we talking under 20?

A. Yes.

Q. How about under ten?

A. I don't know about that.

Q. But definitely under 20. That's in your [36] career?

A. I think so, yes. The situations in which abortion is necessary to preserve the health of the mother are rare as hen's teeth. But they do, in fact, arise. But even in someone who focuses in critically ill mothers, as I do, and have transports from all around the Intermountain West for mothers who are sick, the number of times in which terminating that pregnancy will benefit the mother's health are so uncommon that that's where you get the numbers I have.

Q. Now, your report also states you're familiar with surgical abortion using dilation and evacuation, the D&E; is that correct?

A. Yes.

Q. What is the basis for your familiarity with the D&E procedure?

A. Well, I've done a handful. I think what I estimated is a dozen, maybe, something like that. This would be for later—later than a D&C.

Q. So, you've done approximately 12 D&E abortions?

A. That sound reasonable, sure.

Q. That's over the course of your career?

A. Yes.

Q. Could you describe the D&E procedure for us?

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[38]

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Q. And you've indicated you've never done a D&E post 20 weeks.

A. I think that's true.

Q. And why is that?

A. Lack of experience and the availability of a medical technique.

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[39]

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Q. So when you've done D&E abortions for non-elective reasons, what are the circumstances under which you've done them?

A. Well, the similar things, heart disease, hypertensive disease; cystic fibrosis—that is, maternal cystic fibrosis with severe pulmonary compromise; and then some anencephalics and other lethal anomalies.

Q. And do you know whether D&E is contraindicated for any of those conditions?

A. I know it is not.

Q. It is not contraindicated?

A. It is not contraindicated for any of those conditions.

[40]

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Q. Under what circumstances have you referred a patient for a later D&E?

A. Well, there have been—I can think of a couple times in 20 years when a later D&E was needed or later termination was needed but, for whatever reason, we didn't think that a medical—a medical termination was appropriate or perhaps the medical termination had failed or the mother chose, I think—you know, let me go back.

I can't ever think of a situation, actually, in which the medical induction was inappropriate. But there were some cases where the mother has chosen not to have a medical and she wants the surgical procedure, rather than go through the medical induction. I think those have been the primary times.

Q. And why has the mother chosen not to do a medical procedure in those situations that you just described?

A. She wants to be, I think, done with it quicker.

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[41]

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THE WITNESS: Well, I think that's too broad. But the surgical procedure you're talking about, D&E, would always take substantially less time than a medical induction at the same gestational age.

Q. (BY MS. PARKER) And sometimes mothers prefer to go that route to have less time for the procedure?

MS. GOWAN: Objection.

THE WITNESS: Yes, that's true.

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[48]

So with that sort of expertise in ultrasound to grasp what one wants to grasp is a hundred times easier than the umbilical sample and those sorts of procedures.

Q. So is it your goal to do as few passes as possible with the instruments in a D&E procedure?

MS. GOWAN: Objection to form.

THE WITNESS: No, I wouldn't say that. No, the goal is simply to empty the uterus.

Q. (BY MS. PARKER) Do you see any benefit to doing it with as few passes as possible?

A. If you're—no, if you're good. If you've got the—if you're doing it under ultrasound guidance and you're a skilled sonographer, you simply will not place that forceps anyplace you cannot see.

If you're klutzing around in there or poking around blindly, well, sure. In fact, no passes would be best for a person like that. But if you're skilled and you've got ultrasound, you can see every second of the

procedure exactly where all the structures are that you do and do not want to approach, exactly where the forceps is and is not.

And even for me, who doesn't do very many of them, I can't see how you could possibly perforate. So as many passes as you want, as long as you don't [49] perforate, is not going to hurt. If you're doing it properly with the proper visualization, I don't really see the numbers of passes would be germane.

Q. Have you ever done a D&E procedure when the fetus's head has become stuck?

A. No.

Q. Have you ever heard of that happening?

A. Stuck? No. Usually, it's broken up by the forceps. And understand that at these little ages, stuck is a relative term. I mean, even in a full-term baby you're delivering breech in those situations where the head gets stuck, we're now talking a matter of three or four more minutes before the head is going to deliver. That's with an eight-pound baby.

So the head getting stuck on a small fetus is not very stuck. By the time you've got that out, the rest of the body out, a stuck head is a matter of minutes before a gentle extraction will expel it.

Q. Do you every use KCL for D&E abortions?

A. No.

Q. How about Digoxin?

A. No, not for that purpose.

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[52]

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Q. (BY MS. PARKER) Other than reading articles by those two physicians, do you have any other basis for your understanding of the D&X method of abortion?

A. Well, of the technical procedure of the D&X; that is, the way these doctors do it, I can only take—I take it for granted that the way they say they do it, they do it.

Now, in terms of indications for it, sure. The entire understanding of maternal/fetal physiology, anatomy, maternal critical illness, and maternal not-so-critical illness would give me an understanding of when that procedure may be advantageous, when it may not be advantageous, assuming everything they say about the technical aspects of it are true. But in terms of how D&X doers do the D&X, I only have their descriptions.

Q. And when did you read their descriptions for the first time?

A. In conjunction with this case.

Q. You had not previously read those articles?

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[52]

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[53]

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Q. So it's limited to those two articles?

A. Yeah.

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[54]

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Q. (BY MS. PARKER) And you, yourself, have never performed a D&X abortion?

A. Correct.

Q. And you've never seen one performed?

A. Correct.

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[55]

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Q. Do you know whether the D&X method is taught in any medical schools?

A. No.

Q. Do you consider yourself skilled in the provision of abortion?

A. Only moderately.

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Q. (BY MS. PARKER) And how many babies do you deliver a year?

A. Well, I, myself, it depends upon the—what you're going to categorize. I probably deliver now 20 a year with my own hands. I probably deliver another 150 to 200 where my hands are over the hands of the resident or medical students. I'm right there supervising it. And I probably see 50 to 60 complex patients a week—pregnant patients. But in most cases the delivery is not the issue, so we leave that up to the private

doctor and I manage other aspects of pregnancy. So that is the spectrum.

Q. And approximately how many babies have you delivered in your career?

A. Well, when people ask me this, I say, More than 5,000, but less than 10,000, and that's about as good as I can do.

Q. Do you ever counsel patients about the abortion option?

[57]

A. Sure.

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[58]

A. Sure.

Q. If there's a conflict of interest between the pregnant woman and the fetus, your view is that the mother's interests are predominant in that conflict?

A. Well, from a medical standpoint. And I mean, you asked me once about—I'm not here to talk about social, ethical, moral things. More smarter people than I am can figure that out.

From a medical standpoint, yes. When there is a medical conflict and the medical interests of the mother differ from the medical interests of the fetus, the mother's medical interests must come first, if you can't satisfy both, which, fortunately, in the vast majority of cases, we can. But where both cannot be satisfied, it's axiomatic that the mother's medical interest must come first.

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[61]

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Q. (BY MS. PARKER) So where there's significant health risks to the pregnancy, it's the patient's decision as to whether to terminate the pregnancy, made in consultation with the physician?

A. Yes.

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Q. Okay. Other than those abortions about which you've just testified and the different methods, have you ever observed different types of abortion methods being performed?

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THE WITNESS: No, not that I can think of.

Q. (BY MS. PARKER) I understand you're board certified in OB/GYN in maternal/fetal medicine.

A. Yes.

Q. Do you have any certification in performing abortions, specifically?

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[70] statute banned?

A. Well, sure. Yes, I did.

Q. And what was that opinion?

A. Well, the D&X procedure, as very specifically—the statute seemed very, very specific about what it banned and what it did not ban.

Q. So, is it your opinion that the statute only bans the D&X procedure that was outlined in the Haskell and McMahon articles?

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THE WITNESS: I think it's even more limited than that.

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Q. Exhibit 4 is now a copy of the act that's at issue in this case, which is before you, correct? And you indicated that you had formed an opinion as to what procedure this act covered—

A. Yes.

Q. —is that right?

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Q. (BY MS. PARKER) And could you tell us what that opinion is?

A. Yes. Well, you asked me what how it differed from the McMahon—from the procedures described by the MaMahon—

Q. Right.

A. —thing. Yeah. Well, the first thing is that, of course, the McMahon procedure would apply to [73] dead fetuses—could be applied to dead fetuses, as well as living fetuses. And this procedure clearly excludes dead fetuses. That is, this statute or law or whatever it is says nothing to do with dead fetuses.

Number two, I don't think McMahon claimed this, but I think some of your experts have claimed that by some amazing accident, maybe they're not trying to do—they're going in to do one procedure and, what do

you know, the next thing you know the whole baby is out except up to the head and they did it by accident.

Well, if that's actually true and people who do this by accident are doing these procedures, this would certainly not apply to that, because this talks about deliberately and intentionally vaginally delivers a living fetus, et cetera for the purpose of performing an overt act.

There was also—I think there were also some suggestions by some of the people who described this—I guess by your experts—that somehow this would prohibit maybe decompression—needle decompression of a child with hydrocephalus. But indeed, that would not apply, because in this case the statute applies to an overt act that you know will kill the partially delivered fetus. And simply decompressing cerebral spinal fluid for hydrocephalus, you cannot know [74] that will kill.

Many of these kids are born—are born alive. So by accident, by needle decompression or by—or a dead fetus, none of those things would—my reading of this statute would even come close to applying there. So this was more restricted. This only restricts a subset of partial-birth abortions performed intentionally on a live fetus.

Q. But do you read the statute to cover the D&X procedure that we've been speaking about the past hour?

A. For a living fetus intentionally, yes.

* * * * *

[88] rather than risk tearing the cervix with over dilation in D&X or with the instruments used to punc-

ture or collapse the skull or suck out the brains. Do you see that?

A. I do.

Q. And is that your opinion?

A. Well, let's see. I think if you put a period after the word—after D&X. I wouldn't phrase it in those words, but I think it's not bad—not a bad try.

Q. So it's your opinion that it's always better to make another pass with an instrument, rather than risk tearing the cervix with over dilation?

MS. GOWAN: Object to the form of the question.

THE WITNESS: I said that conveys the general principle. The way my opinion would be—again, this is Ms. Gowan's words—that even if—I mean, the current data would not suggest the number of passes—there's no data that suggests the number of passes increases the risk.

And, in fact, the Jacot article showed that there was no increased risk of—actually, there were more perforations with suction D&C than there were with D&E where you're not passing grasping instruments at all into the uterus. So what data we have would suggest, in [89] fact, the risk of perforation is virtually nonexistent when appropriately done in any case and if—remember, that was an older article.

If you used modern methods and were visualizing with ultrasound, I don't see how you could possibly —how another pass could possibly—or another ten passes or another 30 passes could possibly be trouble, unless you don't know what you're doing. Because you simply should not make a pass unless you can see exactly where everything is and where you are.

On the other hand, we know that inappropriate types and degrees of mechanical cervical dilatation can predispose to preterm birth in subsequent pregnancies. I don't think anybody would deny that.

When you've got a procedure like this with Dr. Haskell where principle one is dilation and principle two, in giant capital letters, is more dilation, and you're dilating up to 75 percent of the BCB of the fetus, I would think you would have some pretty good data documenting the fact that these women do not have an increased risk of subsequent preterm birth before one could ethically subject a woman to an unproven procedure requiring this sort of dilatation when you've got a procedure whose incredible safety record has been documented for two decades. That would [90] be the way I would say it.

Q. (BY MS. PARKER) So, the procedure that you think has a good safety record is the D&E procedure?

A. Yeah, sure.

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[100]

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MS. GOWAN: Where are we looking on the report here?

MS. PARKER: On page 3, Exhibit 6.

Q. (BY MS. PARKER) So the first opinion goes to the medical necessity of a D&X procedure. And you indicate on page 3 that, the changes to a woman's physiology as a result of pregnancy occur slowly and are [101] not resolved until some weeks after her pregnancy is concluded either through birth or abortion.

A. Yes.

Q. Do you see that? What do you mean by that statement?

A. Well, I understood from—I understand that there has been some allegations or some assertions that a D&X is safer because it can be done quicker.

Now, I also understand that this retrospective paper may show that may not be the case. But whether it is—let's say it can be done quicker. What I'm saying is there simply is no condition in pregnancy in which completing the expulsion of the fetus now as opposed to 30 minutes from now or one hour from now makes any difference whatsoever.

And so even if this were—if this were necessary to preserve the health of a mother, and if it were shown that this could be done on the average a few minutes quicker than a D&E procedure, that's trivial, in terms of any medical condition known to man, because neither health changes, physiologic changes, nor disease processes resolve with the delivery of the fetus.

In fact, in most cases the fetus is completely irrelevant to the risk to the pregnancy. It's the placenta and the hormones the placenta make [102] that are the problem. So ultimately, the problem for which you are doing the termination is not going to begin resolution until the placenta is delivered and then it's over one way or another. Those minutes potentially saved are not relevant to the medical care.

Q. You're making that statement in the context of comparing a D&X to the D&E method?

A. Yes.

Q. What about in comparison to induction method, which you testified earlier took considerably more time?

A. Well, I'm trying to think of a condition in which —clearly eight, ten hours is different than either of these procedures. That's a significantly longer period of time. Now, I'm having trouble thinking of it—I really can't think of an example in which even that length of time would matter.

Q. What about the example you gave earlier today when it was 36 or 48 hours was the length of time for an induction?

A. Still with assuming the rest of the medical care is appropriate, even in that extreme I can't right now think of a situation. But it's true that if you did that you might have to give less medicine or something.

So there are times when a D&E—I would say not very many, but when a D&E might be preferable [103] time-wise to a medical abortion. I can't think of any, but at least we're getting closer to some semblance of reality there. But D&E and versus this D&X, no.

Q. Further on in that paragraph you are stating, While there are many conditions that may place a woman's health at risk or her life in jeopardy, very few of these require immediate termination of a pregnancy.

A. Yes.

Q. Is it your opinion that there are some that may require immediate termination of a pregnancy?

A. Sure. "Immediate" being today or tomorrow, as opposed to next week or the week after, sure.

Q. What are those conditions?

A. The only one I can think of would be severe preeclampsia with either profound thrombo—different variances of severe preeclampsia. It might be—which, of course, is extremely rare prior to the third trimester, but can occur.

Q. And what—

A. And there a D&E—there's an example. I can't think I've encountered such a case in—that I can remember. But theoretically, there could be an example of a situation where there D&E might be preferable to an induction, if you were talking about a 22-, 23-week fetus from a time standpoint.

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[106]

A. You asked that as one of the very first questions this morning, and there's too many to—I gave you the same—I give you the same examples again, heart disease, lung disease.

Q. Well, you indicated on page 4 of your expert report, Exhibit 6, that there was some cardiac conditions.

A. Sure.

Q. What are those conditions? What cardiac conditions were you referring to when you mentioned them on page 4 of your report?

A. Well, there are, I mean, many. Let's start: Pulmonary hypertension of any etiology, aortic aneurisms, prior myocardial infarctions, severe valvular disease, potentially certain forms of lethal dysrhythmia, preexisting cardiomyopathy.

Q. And these are all cardiac conditions that may require termination of a pregnancy?

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THE WITNESS: Yes, they are, to preserve the health of the mother.

Q. (BY MS. PARKER) And your report refers specifically to peripartum cardiomyopathy; is that correct?

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Q. And are there any studies about the methods of abortion used in the circumstances of renal disease?

A. Let me go back. This may be one condition where it—no, there would be no contraindications to it, but there could be some cases where you might prefer D&E over medical complications.

I've seen one case in my whole life where we could not control the blood pressure. And so the—you know, the one-day thing would not have been as preferable as a quick surgical delivery. That happened after—after 20 weeks. I've never seen or heard or read about such a case occurring in the abortion range of weeks, but it could, and then you might want to do a [111] D&E.

Q. And have you seen any studies about the techniques that are used—abortion techniques for this condition?

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THE WITNESS: No, I don't think there are, because so few cases—like most of these conditions, so

few cases require pregnancy termination prior to fetal viability that I don't think you could—you could get such case reports.

Q. (BY MS. PARKER) Why is that? Do you need a certain number of cases in order to conduct a study?

A. Sure. Sure.

Q. And what is your view as to how many cases you need?

A. Depends on what you're trying to show. One case report is interesting. But, I mean, in America each year I don't think there are enough—you'd probably go ten years in the United States before there are enough pregnancy terminations for any one indication; that if you gather every single patient in there, you'd still be hard-pressed to come up with any statistically significant numbers.

Again, it is just rare as rare that [112] termination is necessary with the health of the mother. Granted, it can occur, but it's just incredibly rare.

Q. And so you don't have statistically a significant enough number of these cases to warrant doing the studies or have a study that would be efficacious?

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THE WITNESS: It would be difficult to randomize, for any given medical condition, any two procedures. It would be very easy, of course, to randomize elective terminations. Plenty of those are done. It could be done in a flash, randomizing D&X to D&E, if this were to be treated the same way as any other surgical procedure. But for medical indications, no, it would be very difficult to do that.

Q. (BY MS. PARKER) The same paragraph on page 5 of Exhibit 6 references severe HELLP syndrome.

A. Yes. That's simply a variant of severe pre-eclampsia.

Q. Do you know what characterizes it?

A. Low platelets, hemolysis, hepatocellular dysfunction.

Q. And what risks to pregnancy does it pose?

A. Death.

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[128]

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Q. Okay. The next condition you indicate is a prior uterine incision.

[129]

A. Yes.

Q. And what do you mean by this?

A. Well, women who have had an incision in the upper part or fundus of the uterus.

Q. Would that have been for a prior cesarean section?

A. Or a fibroid removal. Potentially even a perforation at the time of a previous abortion.

Q. And what are the health risks that are posed in that situation?

A. Really—

MS. GOWAN: Objection.

THE WITNESS: —to the mother, none. But there is an increased risk in some of those situations of the uterus rupturing near term, which could—which, if appropriately handled, is not really going to be an issue for the mother, but could be devastating for the fetus.

But potentially a woman can terminate for any reason she feels like and she might have a fundal incision. And there is a situation where under some circumstances medical versus surgical could be—there could be a clear preference.

Q. (BY MS. PARKER) So, is there a preferred method of abortion where there's been a prior fundal [130] incision?

MS. GOWAN: Objection.

THE WITNESS: Well, of course, the first trimester, no. I mean, one could either use the early—the very early medical means for terminating an early first trimester pregnancy, one could use a suction D&C. But if you got into the late second trimester, if you're terminating beyond 20 weeks, let's say, I would say as a general principle, although there is no data to support this, it would be my opinion that a D&E would be preferable to a—to an induction.

Clearly, at term or in the third trimester, induction would be contraindicated. Once again, it's for fetal reasons. And so I don't have any data that the risk of rupture is actually greater in the 20-to-23-or-24-week range at all. But it would be my opinion that it probably would be. And that probably a D&E, if a woman so elected, would be a preferable means under those circumstances.

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Q. And you testified earlier that you've never done a KCL injection, is that correct?

A. For?

Q. Purposes of causing fetal demise.

MS. GOWAN: Objection.

THE WITNESS: Right.

Q. (BY MS. PARKER) And why not?

A. The only cases in which that has ever been desirable have been some women with what we call higher order multiples, quints, sextuplets, that sort of thing, which require multiple KCL injections. And because one is very concerned about not disrupting the two or three fetuses the woman has chosen to leave behind, we send those to people who do those all the time. And, fortunately, that's a rare circumstance.

In other words for safety—for safety's sake of the fetus—of the living fetuses—let me put it this way. KCL injection is trivial to the mother, it has no risks. But KCL injection or any injection of anything into a woman with sextuplets or quintuplets carries with it risks to the surviving twins, if one is doing selective termination.

And because those are triply rare, there's a [134] guy in Denver everyone sends their patients to from this area. So one person is really good at that.

Q. I think my question, though, was—

A. That's why I've never done it. We've sent them to Denver.

Q. That's the answer to the question. You've never done it because you send it elsewhere?

A. Correct, because of specific fetal risks.

Q. And you don't see any situation for doing a KCL injection, other than a situation where you have multiple fetuses and you're doing selective and some will survive and some won't?

MS. GOWAN: Objection.

THE WITNESS: Except a situation—right, I don't see any circumstances. But if somehow I've missed one in 20 years of critical care obstetrics and there was some situation under which D&X would be preferable to D&E, then KCL injection—which, again, is easy and to the mother a trivial procedure—could be done and this—and we have nothing to do with this law and the ban would not prohibit that from being done.

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Q. (BY MS. PARKER) To go back to an earlier question, you, yourself, do not do KCL injections; is that right?

A. That's right.

Q. And the reason you don't do them is that you don't have any circumstances where you find it necessary to do a KCL injection?

MS. GOWAN: Objection.

THE WITNESS: No. The only circumstances I've every [*sic*] encountered have been the high order multiples or the fetal—

Q. (BY MS. PARKER) And you refer those out?

A. I refer out. I've never encountered a situation where either medical induction or D&E didn't work in the abortion arena. But if it did, it would be easy enough to do. And again, hitting the fetal heart is much, much easier than hitting the umbilical cord with a needle, which we do all the time with relative ease. So it's not going to be a risk to the mother to do that.

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Q. (BY MS. PARKER) Are there any fetal anomalies that might necessitate termination of pregnancy?

MS. GOWAN: Objection.

THE WITNESS: Not for maternal health reasons.

Q. (BY MS. PARKER) But you're saying the fetal anomalies may—may be such that the mother would choose to terminate the pregnancy?

A. Yes.

Q. And I think you gave us some examples in your report. One was hydrocephaly?

A. Could be. That would be very rare. Anencephaly would be much more common.

Q. What is anencephaly?

A. The absence of development of the skull and cerebral hemispheres.

Q. And I take it in that circumstance termination is advisable because the fetus won't survive * * *.

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[142]

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Q. (BY MS. PARKER) Is medical induction contra-indicated in certain circumstances where there are conjoined twins?

A. It depends upon the size of it and how they're conjoined and whether it's going to fit out.

But as I mentioned, D&X, to my knowledge, has never even been tried with conjoined twins. And the size of the head is the least of the problems in getting conjoined twins out. So I can't imagine D&X would be chosen under those circumstances.

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[148] * * * you don't see any basis for using D&X, because there are well-studied—there is a well-studied alternative in the form of D&E. Do you see that?

A. Yes.

Q. And you've mentioned several times during the course of the day a study of, I think, approximately 11,000 patients involving D&E; is that right?

A. Yes.

Q. What is that study?

A. Peterson, '83.

Q. That was published in 1983?

A. Yeah.

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[150] established, a physician could not do another alternative until there was, first, a study?

MS. GOWAN: Objection.

THE WITNESS: Once there is a—if you've got a condition and you've got a treatment or a procedure which is incredibly safe and incredibly effective with essentially negligible risk of long-term adverse outcomes, yeah. Then before a physician should embark upon a new procedure, especially one that poses, I think in the words of McMahon, significant and burdensome changes in the technique, it would behoove you to do this.

You treat this like any other new surgical procedure. You take it before IRB, have the study approved, conduct a prospective and randomized control trial and document what the true risks and benefits are.

Now, if you've got no alternative where all your procedures don't work at all, that's a different story. But you simply can't make that case. With the data available even 20 years ago on D&E that there wasn't an incredibly safe—as close to risk-free procedure as it comes for procedures, and before you differ from that, embark upon something new, yeah, that's the way we do it.

I mean, even to the point of sewing an [151] alteration in the way you sew a c-section scar, using one suture or two, requires prospective randomized trial. It was done in an appropriate fashion. Now, that's a trivial, minor, insignificant change in terms of risks, unlike this change of the D&E.

And I don't know why some people seem to think we give D&E a free ride just because it's politically correct when we don't give a free ride to other new diagnostic and therapeutic procedures until they've

been proven safe and effective. That's the incongruity of it all.

Q. (BY MS. PARKER) How do you prove something is safe and effective until you've had the study? How do you ever do the procedure to conduct the study until you've had the study?

A. You don't. But what you don't do is, first of all, make any claim that this new study that's never been studied—this new procedure that's never been studied is necessary to safeguard the health of the mother, which is absolute nonsense based on no data at all.

And then what you do if you think it might be sometime, then you can—you go through IRB, you construct a prospective, randomized trial, you carry it out with sufficient power—statistical power to give [152] you believable results, and then you publish it. What you don't do is just based on some anecdote or a group of anecdotal evidence say, This procedure is great, we don't really need to study it, when you've got this very safe alternative.

Q. Well, at the time that the D&E study was conducted by Peterson back in '83, were there no other methods of abortion that had been established as being safe?

MS. GOWAN: Objection.

THE WITNESS: Yeah, I don't think—there were significant—especially with the medical methods used at that time, significant complications and there were no really effective surgical alternatives other than hysterotomy, which carries with it huge morbidity, for the late trimester termination that was medically contraindicated.

Q. (BY MS. PARKER) What about prostaglandin injections? Weren't those in effect before the Peterson study came out?

A. Actually, you know, in '83, yeah, there were prostaglandins available. But, again, there was not a safe surgical alternative. It was recognized that there were indications—there were times—in fact, misoprostol was not used for that purpose at that point.

[153]

The principal agent was PGF2 alpha, and there was a recognition that was simply inappropriate for some patients.

So, now we're kind of in the wasteland where there is no acceptable surgical alternative. And people came up with D&E and then did, in fact, publish large series showing its safety and efficacy as much they could. But now we've got one.

And, you know, I mean, the incredible thing is that this argument has been going on—I mean, the—I would say abortion advocates have been touting the wonders of D&E and how it's incredibly safe and has no significant risks and it's just great. And then suddenly those very same people are telling us, Oh, my gosh, D&E, we've got to come up with a new procedure.

Unfortunately, the data published by the large abortion clinics does not bear out any allegations that D&E is anything other than incredibly safe and an incredibly effective procedure. So if we're going to alter it, let's do science and not do ancedotes.

Q. You indicate on page 8 of your report that, fewer passes with an instrument is only an issue if trauma is done with a pass.

A. Yes.

Q. Do you see that?

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[155] you're referencing?

A. That was the French name. Jacot, was it? Jacot, '93, comparison of suction D&C with D&E. And again, the difference wasn't statistically significant. But in an absolute sense, there was actually less perforations with the D&E procedure than with the D&C procedure.

So, in fact, there is some data. Not only don't I agree with that theoretically, that the more passes you do the greater chance of perf, but what limited data there is suggests it's not true. And if it were, would it justify the extra dilatation with unknown effects on future reproduction? Not without study.

Q. Is it—do you know whether cervical laceration is a known complication of D&E?

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THE WITNESS: I'm sure it is. The more you dilate, the more you lacerate the cervix, sure. Sure, the more you may lacerate the cervix.

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Q. (BY MS. PARKER) Right. You indicated you don't know how much dilation of the cervix is used with a D&X.

A. No, we know. 75 percent of the biparietal diameter. I'm not claiming that one can realistically compare directly that degree of dilatation with the old accouche-

ment force where you might dilate the cervix to ten centimeters mechanically, I'm simply saying that we know that excessive dilatation causes all sorts of problems.

Q. But—

A. Why subject a woman to dilatation followed by more dilatation without any evidence that actually that doesn't cause subsequent reproductive problems?

[159]

Irresponsible.

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[161]

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Q. How much dilatation can you go up to, to be safe?

A. Nobody knows, nobody knows. But except that you can go up to the amount that you can do for a D&E and be safe.

Q. And what is that amount?

A. Well, enough to pass the forceps—enough to pass the Sopher forceps and extract the fetus, because we have huge volumes of data showing you can do that amount of dilatation and do it safely. We simply don't know. Maybe it will turn out that, in fact, you can do a D&X and you don't cause subsequent reproductive problems. Could be, maybe it won't be. But in the absence of data and with a perfectly good alternative, what responsible person is going to recommend that—

[162]

Q. So your—

A. —to their patients?

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It's your position that there is no current data, such as we know, whether D&X is safe or not safe; is that correct?

MS. GOWAN: Objection.

THE WITNESS: Yes, that is.

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[174]

Q. There are risks of cesarean?

A. Of course there are.

Q. And what about as compared to the decompression?

A. Well, the risks to the mother of decompression are essentially zero in good hands.

Q. And are there any quantifiable risks to a cesarean section?

A. Of course there are.

Q. What are those?

A. Infection, hemorrhage, injuring other organs.

Q. Your report also states that there are times when examination of the intact fetus after birth may help in a diagnosis of a fetal anomaly. Is that your opinion?

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THE WITNESS: A fetal syndrome, yes.

Q. (BY MS. PARKER) And what is your opinion as to the best method that should be used to achieve intactness?

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THE WITNESS: In the majority of cases, it's not necessary, because you made the diagnosis by ultrasound or by amniocentesis. But there certainly are other cases in which examination of the intact baby [175] might help you put a name on the syndrome, if you're interested in putting a name on that syndrome.

And under those circumstances, the most appropriate ways would be medical induction of labor.

Well, the choices would be medical induction, killing the fetus by one of the methods we mentioned, and then doing a D&X.

Q. (BY MS. PARKER) KCL or the cord compression?

A. Or the Digoxin. And then doing a D&X.

Actually, the preferred method would be medical in all cases, because then you don't destroy the brain. And the brain is heavily involved in many serious genetic syndromes and examination of the brain may be beneficial. So by far and away, the method of choice would be simply medical termination.

The second medical choice would be simply to—you could—would be either a plain old D&X—and I do mean D&X—or to kill the baby first and then do a D&X. Both of those would be equally good medically—equally appropriate, equally safe medically. Both of them would be inferior to medical induction, in most cases.

Q. What about those circumstances where you testified earlier where medical inductions are contraindicated?

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[176]

A. Yeah, then you're right, some small percentage of women where medical induction is contraindicated—a small percentage of those women will have anomalies, and a small percentage of those anomalies would be severe enough to warrant termination. And a small percentage of those women would choose termination. And a small percentage of those women will need the intact fetus to put a name on it. And a small percentage of those women will need an intact fetus but don't need the brain to put a name on it.

And under all of those—when such a woman is found someday that, in fact, medical termination will not be the appropriate thing for her but, in fact, either D&X or first killing the baby and then performing a D&X would be equally safe and effective methods.

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[178]

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Q. And other than the declarations of the plaintiffs' experts in this case, have you encountered any other facts or articles or other matters that are not consistent with the opinions you've expressed—

MS. GOWAN: Objection to the form of the question.

Q. (BY MS. PARKER)—in our case?

A. Sure.

Q. And what were those?

A. Well, even in the—there was something, I believe, even in this—in the law or somewhere that * * *.

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[179] said partial-birth abortion increases the risk of amniotic fluid embolism. Well, 14(A), much of that I disagree with.

Q. What does 14(A) says?

A. 14(A) talks about the risks of partial-birth abortion to women who undergo this procedure.

Q. And you say you disagree with most of that?

A. Yeah. Well, I disagree that those are—that any one could say those are risks. Theoretically, they could be, but I wouldn't be in a position to say that those—the partial-birth abortion increases those risks compared to D&E or any other method of termination anymore than anybody could say that partial-birth abortion does not increase those risks and in any way improves the health of the mother.

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[183] spontaneously. They evolve by an idea being subjected to prospective, randomized trials, the safety of a new procedure and the benefits being demonstrated, and then that procedure being adopted for general use.

Q. (BY MS. PARKER) So is it your view that there is no procedure—that no procedure should be done or

followed unless there has been a prospective, randomized trial proving its safety and efficacy?

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THE WITNESS: No, that's not my opinion. As I mentioned before, if you have a—if you've got a problem that has no good answer, and there is no procedure, in fact, that's ever been shown to be safe and effective and almost everybody dies as an example, then it's fair game for just about anything, okay?

But when there is a—for better or for worse, when on February 12th there is a well-established, incredibly well-studied procedure, which is shown to be incredibly safe and incredibly effective for dealing with a specific problem under those circumstances, yes, before one engages in a significant and burdensome—to use the words of one of the greatest proponents of partial-birth abortion—significant and burdensome change in technique, one absolutely does need to have prospective, randomized [184] trials demonstrating safety, especially when there are at least good theoretical reasons to believe it might not be as safe, and that's the increased cervical trauma.

Q. (BY MS. PARKER) And do you believe that procedures that a physician performs that have not been subjected to prospective, randomized trials and where there are other safe methods should be criminalized?

* * * * *

THE WITNESS: That would be too broad. No, but it would be generally bad practice. Now, again, where there are established procedures that essentially always work with negligible risks, a doctor who

launches out on his own—obviously, if you're in your office, you can do anything you want.

But a doctor who launches out on his own on a new procedure, unless for some reason this doctor is given carte blanche for political consideration, in fact, that doctor would, under all circumstances, be subjected to significant censure and discipline. It's just basic patient rights. You don't experiment with something new unless it's been done appropriately and set up appropriately.

Q. (BY MS. PARKER) Have you ever used an unstudied or an experimental procedure in your career?

* * * * *

[190]

Q. When have you done that?

A. All the time. I do it every day with preterm labor. Okay. You picked the wrong example because, in fact, terbutaline did have some initial apparently good science behind it. But, you see, this is the difference. There is no proven effective method for stopping preterm labor. Nothing seems to work and it's a terrible disease.

So when you have got a terrible disease and you don't have any method that seems to work, then it's perfectly justified to hunt around for a method. But if there were a method that worked essentially all the time and showed the complications rate associated with D&E of serious complications, no one in their right mind would vary from that one iota in the treatment of preterm labor, with that safety and efficacy record, without first clearing it through an IRB and going

through the appropriately conducted prospective trials. That's the difference.

Q. So what do you use for preterm labor that hasn't been subjected to randomized, prospective trials?

A. Well, actually, most of these drugs have been, but not as well as I would like them to be. So Indomethacin, Methedopine. Even Magnesium Sulfate hasn't been studied as well as it could have been. Put * * *.

* * * * *

Supreme Court, U.S.
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No. 05-1382

In the Supreme Court of the United States

ALBERTO R. GONZALES, ATTORNEY GENERAL,
PETITIONER

v.

PLANNED PARENTHOOD FEDERATION OF AMERICA,
INC., ET AL.

ON WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

JOINT APPENDIX
(VOLUME 5)

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PETITION FOR A WRIT OF CERTIORARI FILED: MAY 1, 2006
CERTIORARI GRANTED: JUNE 19, 2006

TABLE OF CONTENTS

Page

Volume 1

Court of appeals docket entries 1
District court docket entries 4
Trial testimony of Dr. Maureen Paul (Mar. 29, 2004) 13
Trial testimony of Dr. Katherine Sheehan (Mar. 29, 2004) 100
Trial testimony of Dr. Eleanor Drey (Mar. 30, 2004) 153
Trial testimony of Dr. Doe (Apr. 1, 2004) 191

Volume 2

Trial testimony of Dr. Frederick Brockhuizen (Apr. 5, 2004) 243
Trial testimony of Dr. Mitchell Creinin (Apr. 5, 2004) 338
Trial testimony of Dr. Carolyn Westhoff (Apr. 6, 2004) 415

Volume 3

Trial testimony of Dr. Stephen T. Chasen (Apr. 16, 2004) 463
Trial testimony of Dr. Watson Bowes, Jr. (Apr. 8, 2004) 543
Trial testimony of Dr. M. LeRoy Sprang (Apr. 9, 2004) 599

Volume 4

Trial testimony of Dr. Elizabeth Shadigian (Apr. 12, 2004) 676
Trial testimony of Dr. Curtis Cook (Apr. 13, 2004) 733
Trial testimony of Dr. Kanwaljeet S. Anand (Apr. 15, 2004) 789

TABLE OF CONTENTS—Continued:

	Page
Deposition of Dr. Joanna Cain (Feb. 10, 2004) [Redacted]	849
Deposition testimony of Dr. Steven L. Clark (Feb. 12, 2004)	862
Volume 5	
Deposition testimony of Dr. Marilyn Conner Frederiksen (Feb. 17, 2004)	905
Deposition testimony of Dr. Amos Grunebaum (Feb. 2, 2004)	928
Deposition testimony of Dr. Cassing Hammond (Feb. 18, 2004)	941
Deposition testimony of Dr. Charles J. Lockwood (Feb. 17, 2004)	983
Deposition Exhibit (Plaintiffs' Exh. 6)	1039
Deposition testimony of Wan J. Kim (Feb. 13, 2004)	1040
Deposition testimony of William Moschella (Feb. 25, 2004)	1049
Stephen T. Chasen et al., *Dilation and Evacuation at ≥ 20 Weeks: Comparison of Operative Techniques*, 190 Am. J. Obstetrics and Gynecology 1180 (2004)	1055 1061
Supplemental complaint (Nov. 13, 2003)	1071
Stipulation and order	1087
Volume 6 (UNDER SEAL)	
Deposition of Dr. Joanna Cain (Feb. 10, 2004) [Unredacted]	1097

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

No. 03-08695

NATIONAL ABORTION FEDERATION, MARK I. EVANS, M.D., CAROLYN WESTHOFF, M.D., M. SC., CASSING HAMMOND, M.D., MARC HELLER, M.D., TIMOTHY R.B. JOHNSON, M.D., STEPHEN CHASEN, M.D., GERSON WEISS, M.D., ON BEHALF OF THEMSELVES AND THEIR PATIENTS, PLAINTIFFS

v.

JOHN ASHCROFT, IN HIS CAPACITY AS ATTORNEY GENERAL OF THE UNITED STATES, ALONG WITH HIS OFFICERS, AGENTS, SERVANTS, EMPLOYEES, AND SUCCESSORS, IN OFFICE, DEFENDANT

DEPOSITION OF
MARILYNN CONNERS FREDERIKSEN, M.D.
Feb. 17, 2004

PRESENT:

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1-312-201-9740
By:
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Appeared on behalf of the Plaintiffs

PRESENT (Continued):

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By:
MS. DEBORAH ADLER
Appeared on behalf of Planned Parenthood Federation of America

* * * * *

[5]

Q. What is your medical specialty?

A. Obstetrics and gynecology.

Q. Do you have a subspecialty?

A. Maternal-fetal medicine and clinical pharmacology.

Q. Pharmacology, you said?

A. Clinical pharmacology.

Q. Any other specialty?

A. No.

Q. Subspecialty, I should say. Do you perform pregnancy terminations?

A. Yes, I do.

[6]

Q. Under what circumstances?

MS. CHAITEN: Object to the form.

BY THE WITNESS:

A. I do terminations until approximately 23 5/7 weeks gestation. Anything beyond approximately 17 weeks will have been for either fetal or maternal indications.

* * * * *

[7]

* * * * *

Q. Can you estimate how many pregnancy terminations you have performed in the course of your career?

A. I have done hundreds. I don't know exactly how many I have done.

* * * * *

[16]

* * * * *

Q. When you are doing a D&E in the second trimester, what do you tell the patient about what you plan to do, and if it varies by gestational age, you can tell me that, as well?

MS. CHAITEN: Object to the form.

BY THE WITNESS:

A. What we plan to do is to pretreat the [17] cervix with Laminaria. Laminaria are seaweed twigs which absorb water from the woman's body and swell, thereby causing gradual dilatation of the cervix.

This reduces the risk of uterine perforation. It allows a patient to have adequate dilatation of the cervix to undergo a second trimester abortion with decreased complications.

Depending upon gestational age, the cervix will be prepared either by one, two, three, or more sets of either Laminaria and/or misoprostol.

Up until around 16 weeks, one episode of placing Laminaria in the cervix is all that is necessary to achieve enough dilatation to allow for extraction of the fetus and the products of conception so that there won't be injury to the mother's tissues or uterus.

After 16 weeks and before—between 16 and about 18 weeks, we use two sets of Laminaria.

These can be as close as three to four hours and as long as 12 hours or more between applications of the Laminaria.

After—at 20 to 23 weeks, we use three to four sets of Laminaria so that we achieve a very [18] widely dilated cervix so that the majority of fetal parts can come out hopefully intact because it assures that less instruments are going into the uterus and, therefore, it is a safer procedure for the mother.

That requires the patient to be in the office several times during the day or sometimes one day and then the morning of the following day, and I have used smaller low dose misoprostol as a mechanism by which the cervix can also be softened and dilated, and it helps

with the Laminaria as well as the amount of dilatation that I can achieve within this period of time.

* * * * *

[25]

* * * * *

Q. How many D&Es would you say you have performed over the course of your career, second trimester?

A. Hundreds.

Q. Have you also performed induction abortions in the second trimester?

A. Yes, I have.

Q. And how many would you say you have done in the course of your career?

A. Hundreds.

Q. At what gestational ages have you performed induction abortions?

A Generally speaking, the induction abortions are usually over 20 weeks. I have performed them to 24 weeks or just prior to 24 weeks, and then I have done lethal anomalies beyond 24 weeks.

* * * * *

[27]

* * * * *

Q. Your understanding is that the purpose of getting the fetus out as intact as possible is in order to do a pathological examination of the fetus?

A. That is the reason—it is one of the reasons. I can give you other reasons.

Another reason would be because with an intact procedure, while getting the fetus out as intact as possible, there is less trauma to the uterine cervix and less chance for traumatic lacerations of the uterine cervix. It is also an easier procedure because you put the forceps in [28] fewer times, and the fetus is extracted with fewer—less instrumentation of the uterus than with a strict dilatation and evacuation.

* * * * *

[WOLSTEIN EXAMINES FREDERIKSEN]

[29] is to try to get the fetus out as intact as possible. This may or may not be possible because of how much cervical dilatation that has been achieved preoperatively.

It also can be dictated by the fetal lie at the particular time of the procedure. Breech presentations are easier to grasp the feet and deliver not only the foot, but with careful manipulation of the fetus, you can deliver the fetus to the trunk where you can essentially do a breech delivery where you are left with a fetal head that can either be compressed or the contents of the fetal head can be reduced by using a scissors to enter the skull and then cause the disruption of the fetal brain. Afterwards, the remainder of the fetus can be then delivered as intact as possible.

* * * * *

[34]

* * * * *

Q. When you have performed the intact D&X, where have you done it?

A. Northwestern Memorial Hospital.

Q. Have you done it anywhere else?

A. I only operate at Northwestern Memorial Hospital.

* * * * *

[48]

* * * * *

Q. So, occasionally, when you use the term "D&E" you are referring to intact dilatation and extraction?

MS. CHAITEN: Object to the form.

BY MS. WOLSTEIN:

Q. I am just trying to understand—

A. Can I explain myself, please.

[49]

Q. Of course.

A. Because an intact dilatation and extraction, in ACOG's definition, includes things that are not necessarily always done with D&E and we can get an intact fetus delivered. And many of these procedures are variations on established obstetrical procedures that are used for the delivery of the breech infant. What this is, is essentially a breech extraction. They include conversion from a vertex to a breech in this definition.

Not all fetuses present as vertex in the midtrimester, nor is the intact D&X always necessary to convert to a breech. In fact, sometimes you can compress the head and then the whole fetus can be delivered as a vertex intact, virtually intact, so you are not doing these four steps.

By ACOG they basically say, "If you don't do these four steps, you have not done a D&X," and that is

where we get involved in what actually are we talking about because, in reality, we are doing D&Es and varying what we are doing with them to essentially do intact deliveries of [50] the fetus so that we can do prenatal diagnosis or we can make sure that the fetus has been delivered so that we don't have to multiply explore the woman's uterus to get remaining fetal parts and we won't necessarily do all of what they say.

Now, they basically make the stipulation that if you don't do this, you don't do a D&X. So then what do you do? I am not quite sure because if you actually compress the head and you got the whole body out, delivered when you delivered—compress the head as a vertex, delivered the whole fetus intact, and I have done it. What have I done? I don't know. But my intent was to evacuate the uterus, and I have succeeded in doing that. So, by definition, I have done a dilatation and evacuation.

* * * * *

[83]

* * * * *

Q. So in the period 16 to 20 weeks, you would not do an induction to terminate a pregnancy at that age, would you, you personally?

A. I have done them and it is possible to do them. If you compare risks and complications with an induction versus a dilatation and evacuation, at our hospital, we have a four times higher rate of complications with induction than D&Es.

Q. At what age are you referring to?

A. We did a study looking at complications after second trimester termination between—I don't know if

we defined it as 13 weeks until 23 weeks. I don't remember exactly the definition.

[84]

But, basically, what we looked at and the hypothesis that we posited was that we did not think that there was an increased risk of uterine—of complications related to cesarean section at our hospital.

There was a paper done out of the University of Alabama that showed that there was a high rate—I don't remember exactly what they came up with, but I think it was a factor of four times higher risk of needing postpartum transfusion and uterine rupture for patients who had a prior cesarean section. So we looked at our statistics.

The difference between Alabama and Northwestern were that the majority of our patients were D&Es and all of the patients at Alabama were inductions, and we showed that there was not any higher risk to cesarean section and the difference was related to the fact that we did D&Es and not inductions. D&Es being safer for the mother than induction.

Q. So D&E is safer than induction at what gestational ages?

A. In the mid-trimester, if you are terminating the pregnancy, it is safer across the [85] continuum of 13 to 23 weeks. 23 1/2, 24 weeks.

Q. What is that based on?

A. Our study from Northwestern.

Q. And the University of Alabama paper?